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ORIGINAL ARTICLES

OTO-MASSAGE IN SUPPURATION OF THE EAR ITS VALUE FOR THE RELIEF OF DEAFNESS AND IN THE TREATMENT OF THE SUPPURATION

Read by title in the Section on Laryngology and Otology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta, Ga, May 5-8 1896

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Upon several occasions I have presented various aspects of oto-massage, but, beyond having noted in one of my papers that I considered the deafness occasioned by suppurative disease of the middle ear peculiarly favorable in its reaction to massage, I have not publicly considered suppurative disease in connection with the subject I have often been asked the value of the method in the deafness and tinnitus, the results of suppurative disease On expressing my opinion that it was of especial value in both conditions, I have naturally been lead to explain why this was the case

In considering the value of massage in the treatment of cases of suppurative disease or of the defects from suppurative disease, the subject naturally divides itself into two parts 1, the consideration of its application and value *in cases undergoing suppuration*, 2, its importance in those in which the suppuration has ceased, deafness being present with or without tinnitus

Eliminating for the present all the acute suppurative cases, those attended with extreme pain and swelling of the parts, we will study a typical case of chronic suppurative disease It will present, in addition to the discharges, which may be meagre or profuse, watery or ropy, colorless, pustular or bloody, a greater or less degree of deafness with or without tinnitus, accompanied usually by a *full or swollen feeling* within the ear, with perhaps a little tenderness and with occasional attacks of pain

The usual treatment for such cases has been careful cleansing of the meatus and middle ear, usually by syringing with warm or medicated water, followed occsionally by cleansing with peroxid of hydrogen solution, and then after thoroughly drying the ear with cotton and perhaps using the Politzer bag or the Siegle speculum, or both, the insufflation of some drying or absorbent powder, such as aristol, iodoform or boracic acid The ordinary mild cases are apt to do fairly well under such routine treatment, especially if it be persisted in, and they often develop a decided improvement in hearing, as well as a marked diminution and, frequently, an entire cessation of the ear discharges

In contradistinction to this the dry method is used by many The meatus is carefully wiped out with cotton, after which, if a probe can be passed through the perforation the middle ear is cleansed as thoroughly as possible Then by means of the Politzer air bag and Siegle speculum, the discharges lying low down in the ear are forced toward and through the perforation in the membrane and the middle ear and meatus are again cleansed with dry cotton, after which drying powders are used

An objection to be urged against the first method above outlined is the syringing of the ear In my opinion this, in many cases, prevents the cessation of the discharge, the water or medicated liquid finds its way into the deeper parts of the ear and not being removed, lies there and acting as a foreign substance, excites irritation and inflammation in the surrounding tissues and thus increases the amount of the discharge Of late, the dry method has come more and more into vogue It has the advantage of removing foreign matters from the ear cavity without subjecting the ear to the possible disadvantages of having the pus replaced by other foreign particles But both methods fail in entirely removing the exudated materials from the middle ear cavity—the former method washing out much of the discharge and diluting the rest—the latter removing considerable but allowing some of the discharge to lie on the floor of the tympanum, as well as leaving a layer of the discharge adherent to all the surfaces and an especially large amount to remain in the attic and on the ossicular structures In these cases to remove the discharges which otherwise are irremovable I employ massage instruments, using them as cleansers and dryers of the middle ear cavity To illustrate this method of using massage I will briefly outline the treatment of an average case of middle ear disease with suppuration Finding that I am dealing with a case of suppuration of the chronic type, I dry out the meatus with a cotton-covered probe and if the perforation in the drumhead be sufficiently large to allow of it, I by the same means cleanse the middle ear as much as I am able, then by the Siegle speculum I suck out as much of the pus as possible and dry the meatus once more, then I inflate with the Politzer bag and force out a little more discharge, which I remove with the dry cotton I then apply to the patient a pneumo-massage apparatus of medium strength and gradually increase the suction I succeed in drawing into the meatus and about the perforation of nearly, if not, all of the discharge which may have adhered to the crypts and along the walls of the middle ear After drying with cotton, I once more use the pneumo-masseur and again dry, after which I use the drying powders or astringent antiseptics, if any of these be neccessary If the ear discharge be too thick or too firm for removal in this manner I then soften the discharge by the use of 3 per cent solution peroxid of hydrogen, after which I proceed as above outlined

In using the pneumo-masseur for the purpose of removing the adherent discharges from the middle ear cavity, I try to use it as forcibly as necessary without in any way imperiling the integrity of the structures, especially avoiding the production of any hemorrhage. I have found by experience that I can usually commence with an exhaust pressure of two ounces to the square inch and gradually increase it to about half a pound to the square inch, often as much as a pound, and rarely up to two pounds to the inch. With an exhaust from half a pound to a pound, the discharges are usually quickly removed, in from three to ten minutes, 300 or less strokes per minute usually sufficing.

Previous to my using the metronomic masseurs, I endeavored to accomplish this same effective cleansing by the use of the Siegle speculum but, necessarily, the results were indifferent. Since I have used the pneumo-masseur in the manner described I find that I can stop the suppuration more quickly than formerly, and often accomplish this result without any therapeusis to the ear whatever. This, however, is not usually the case, and to a considerable extent I rely upon stimulating and drying powders in connection with thorough cleansing and drying.

In acute cases I apply the suction massage just as soon as is possible, believing that adhesions, ulcerations and destruction of the tissues result often from the pressure of the discharge, from its direct corrosive effect and its fermentative results as well as from the progress of the inflammatory affection.

As soon as the pain is sufficiently allayed so that the treatment is bearable, I apply to the ear either the *metronomic ear masseur or a little electric suction* pump and clear the middle ear of all its discharges and accumulations. By securing a clean surface early in the course of the disease I hasten reparative action and avoid the ofttimes destructive effects of the decomposition of unhealthy pus.

These ear discharges lying in the middle ear, envelop the ossicles, fill up the space between the promontory and the membrane, and generally occupy all possible spaces, gluing all together. As a result of this we have occasioned abnormal adhesions between the ossicles and between the ossicles and the surrounding walls, as well as occasionally ligamentous bands between the membrane and surrounding structures, again, in other cases, the disease results not in a tying together of the various parts, but a rending asunder of normal structures, in ulcerations, necroses and sloughings.

In the one case we have anchyloses, adhesions, abnormal growths and thickenings followed often by sclerotic changes, in the other we have necrotic changes with often loss of one or more of the ossicles or greater destruction of the tympanic membrane or ulceration of the mucous lining of the middle ear with inflammation extending, perhaps, into the mastoid or involving the internal ear. It is on account of these often serious results that there is an urgent necessity for prompt action, with the idea of restoring the parts as soon as possible to as nearly a normal condition as can be attained. It is therefore necessary if anything can be gained by pneumo massage, to apply it as early as is admissible.

In some cases I have used the masseur during the acute stage of the attack with marked benefit, allaying the pain and for the time being increasing the amount of suppuration and apparently shortening the attack. I presume the reason for this is that much of the pain in these cases is occasioned by the retention of the discharges, the tissues being filled with discharges which, finding no outlet, have commenced to burrow more and more deeply, the infiltration ever extending and when the pressure from the central inflammatory area is released by means of the exhaust apparatus, the tissues adjoining empty themselves of their contained discharges, thus relieving much of the abnormal tension of the surrounding infiltrated zone, the lessening of the pressure relieving the pain, and the frequent application of the method tending to prevent extension of the inflammation.

From my experience with this method of cleansing the ear, I am convinced that there would be fewer cases of secondary involvement of the internal ear if the practice above outlined was more generally followed. When we consider that the cases of internal ear disease are the most difficult and unsatisfactory with which the ear surgeon has to deal, the necessity of their avoidance is evident. I know of no other measure of relief which exercises such a powerful influence in the avoidance of this complication.

I very much desire to go more deeply into the subject and illustrate it by cases, but I find this to be impossible as I wish to refer to another aspect of the matter, the improvement in hearing brought about by oto-massage in suppurative cases as well as in cases of deafness occasioned by suppurative disease.

Strange as it may seem, I have found in no class of my chronic ear cases such marked improvement of impaired hearing as in those in which the defect was caused by suppuration. Sclerotic changes are rare in these cases until long after the subsidence of the suppurative disease. I will refer to two such cases of deafness, the result of suppurative disease. Two years ago I reported the case of a woman 38 years old who had scarlet fever in her first year. When I saw her the ears were discharging and there was very poor hearing power. After she had been using the massage treatment for some months, not only did the discharge stop, but the hearing improved so much that she had no conscious difficulty in hearing conversation, the watch being heard twenty inches ($\frac{20}{52}$) from the ear. The progress of this case was a steady gain in hearing power from the commencement. From the time of my report to the present there has been no diminution in hearing power.

I will briefly note another case. Miss C. M., 15 years old came to me Dec. 1, 1894, for chronic suppurative disease of the left ear. There was a large perforation and a fair amount of whitish discharge, not very gluey. There was no watch hearing on contact. I treated her ear without massage and succeeded in about four months in stopping the suppuration but the perforation did not heal. I endeavored during another two months to heal the perforation, without success. The hearing distance had improved at this time to hard contact hearing for the watch. I then endeavored to restore the hearing by means of massage, using the pneumo-masseur, but especially the phono-masseur, neglecting the perforatian, hoping it would heal spontaneously. Now, after ten months of such treatment (one visit per week), she hears the watch at ten inches, the perforation remaining unhealed.

In these cases the two kinds of *massage* are valuable—the *phono* to stimulate the nerve, which is more easily accomplished in such cases by reason of the perforation allowing the sound to be carried more directly to the internal ear—the pneumo-masseur being used to break down adhesions and restore abnormal or diseased parts to more healthy action by reason of the stimulation thus produced

To indicate the value of phono-massage, the following experiment will serve April 26, 1896, I tested the hearing of the right ear of Mr C M , aged 28, and found it to be for the watch one-quarter inch His is a case of old suppuration with bone involvement—one which has gone on for twelve or fifteen years and which he thought was incurable The strong phono-masseur was used on his ear for forty minutes with the result that the hearing for the watch was increased to one and one-quarter inches This increased hearing usually gradually disappears unless the treatment is regularly applied If this be done it usually increases, the amount depending on the nature of the case This immediate increase in hearing is a very frequent experience in my work, and one which I usually secure except where there has been most extensive destruction of the middle or internal ear structures In dry suppurative cases where I do not succeed in producing an almost immediate temporary increase in hearing distance, my conclusion is that permanent results are very difficult to attain

In conclusion the facts may be summed up as follows In acute suppurative conditions, pneumo-massage should be tried and if the application be not too painful it will relieve the swelling and the severity of the inflammatory pain and shorten the attack, the purpose of this suction massage being to remove from the ear all possible suppuration and thus, by relieving the tension, lessening the frequency of ulcerations and necrotic processes and preventing adhesions and deep infiltrations of the surrounding tissues

In cases of suppuration that have passed the acute stage the pneumo-masseur is to be used for the purpose of relieving the ear of its discharges and for the relief of extreme tension, preventing ulcerations and necroses, as well as to overcome the formation of adhesions and for the stretching, absorption and destruction of these adhesions when formed, and to stimulate the drumhead and its connecting structures to normal, functional action The phono masseur is to be used in these cases for the purpose of restoring to the ear nerve and its terminals the normal tone and overcoming the sluggishness to response engendered by inaction and disease

In cases of deafness following upon suppurative disease the pneumo-massage is useful for limbering up the diseased and stiffened tissues, to restore their normal action and tone, and to break or stretch abnormal adhesions, to overcome anchylosed joints and give to the ossicles their normal motion, while at the same time improving the circulation of all the middle ear structures—the phono-massage being again used for its effect upon a sluggish, diseased and non-responsive nerve ending

1723 Walnut Street

Intravenous Injections of Sublimate in Ocular Affections —Angelucci has found rapid and thorough recovery follow the use of intravenous injections of 20 centigrams of sublimate and 60 centigrams of chlorid of sodium, in 100 grams of distilled water The dose increasing from 2 to 16 milligrams The cases favorably affected were all of syphilitic origin Iritis, irido choroiditis, papillo retinitis, etc , but the results were negative in all non syphilitic troubles —*Revue Gén d'Ophth* , August 31, from *Arch di Ottalm* No 3

STRICTURE OF THE UPPER PORTION OF THE TRACHEA SUCCESSFULLY TREATED BY DIVULSION THROUGH THE LARYNX

Read in the Section on Laryngology and Otology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

BY JOHN O ROE, M D
ROCHESTER N Y

The following case of stricture of the upper part of the trachea, due to organic contraction, can not, on account of its rarity, fail to be of interest

On November 23, 1895, Miss D , aged 27 years, was referred to me on account of frequent and urgent attacks of dyspnea, which had for a considerable time been exceedingly distressing to her She gave the following history In March, 1888, she had a severe attack of diphtheria, from which it was thought at the time she had fully recovered During the following year, however, it was noticed that she had edema of the feet The edema was found to be associated with albuminuria and was ascribed to that cause Notwithstanding this she enjoyed a fair degree of health

In October, 1890, she became hoarse nearly every day as evening came on This hoarseness continued until December, when she began to have considerable difficulty in breathing The family physician found a swollen condition of the larynx, which he regarded as a consequence of the albuminuria He treated her with steam inhalations, compelling her to remain in bed for about three months continuously with the object of maintaining a uniform temperature and preventing her from contracting cold During this time her health was very good and she gained ten or twelve pounds in weight, although she had one or two severe attacks of dyspnea, lasting three or four days at a time These were attributed entirely to the renal disturbance, since albumin and casts were found in the urine

After a time the dyspnea subsided and in April, 1891, she began to go out Shortly after, however, she took cold, and had another severe attack of dyspnea, lasting several days As warm weather came on her dyspnea disappeared Her voice during the period, since her first attack of hoarseness, had remained quite clear

In August, 1891, she went to Canada and remained there until fall, feeling quite well She continued to feel quite well during the fall, but during the winter she had frequent attacks of dyspnea, very similar to those of previous winters During the following summer she had no special difficulty in breathing, although during July, August and September she was aphonic

During the fall of 1892, she had at times much difficulty in breathing, and that winter she spent in Southern Pines, South Carolina, where she gained much in general health Her breathing, however, was not materially improved, although the atmosphere there was remarkably dry She came home May 1, 1893, and during the following summer was quite well, having little or no difficulty in breathing

During August the cartilaginous portion of her nose began to diminish in size and for about a year afterward there was a gradual settling of this portion of the nose During November, 1894, she had inflammation of the right lung, which nearly proved fatal and very much increased her difficulty in breathing

During the following winter her dyspnea was frequently very urgent These attacks of dyspnea were aggravated very much by accumulations of mucous below the obstruction in the trachea, which she had great difficulty in expelling After expulsion of these accumulations her respiration was for a time very much improved As the warm weather came on, her dyspnea diminished, and during the summer of 1895 she was quite free from it, and felt very well As in previous years, when the cold weather came on, her trouble increased, and last October her dyspnea became very urgent, although her voice remained quite clear

On November 23, when she came under my care, there was found on examination a chronic subglottic laryngitis, with considerable infiltration of the subglottic region About three-fourths of an inch below the larynx there was an annular constriction, which appeared something like a membranous formation Notwithstanding the fact that no history of syphilis could be obtained, as the girl's character was beyond question, the sinking in of the nose appeared more or less positive evidence that the trouble was of a specific nature

Previous to the time that her nose began to diminish in size, her dyspnea was attributed entirely to the albuminuria, and she was treated accordingly, but after this manifestation it was thought that a specific trouble must be the cause of the difficulty Since it seemed so certain that it must be of that nature, I placed her upon an antisyphilitic treatment, in both large and small doses, but with no benefit whatever In fact, the dyspnea was aggravated by it, whereas iron and strychnia improved her condition

Locally I attempted to reduce the subglottic laryngitis by sprays and insufflation of a power composed of tannin, sugar of milk, and a small quantity of morphia This appeared to lessen the subglottic congestion, but had no effect in lessening the constriction in the trachea

On December 4, the dyspnea became so urgent that suffocation seemed imminent, necessitating either tracheotomy or intubation of the larynx The latter was resorted to and the tube was retained for two days, when it became so irritating as to require removal It had the effect, however, of so enlarging the constriction that the dyspnea for a considerable time entirely disappeared The constriction gradually returned, and in February it again became necessary to introduce the tube

As the tube was being introduced by the aid of the mirror, she suddenly threw her head forward, bringing the end of the tube quite forcibly against the anterior portion of the trachea As she jumped back, the tube was brought out She at once, however, experienced complete relief from her dyspnea and on the examination of her larynx, I found that the tube had broken down the anterior portion of the constriction so that the lumen of the anterior portion of the trachea was quite free

Seeing that this constriction could be disrupted, I introduced a pair of Grant's forceps, with blades closed, until they passed below the constriction I then opened the blades until the widest portion of them nearly filled the trachea Holding the handles firmly I drew the blades up in the constricted portion, so dilating it as to break down much of the posterior portion of the constriction and leave the trachea quite free As the glottis did not permit the forceps to open wide enough to fully break down the stricture, I had a pair of dilating forceps with double-jointed blades so constructed as to increase the expansion of the lower blades to the full width of the trachea and to completely obliterate the stricture

Since that time the constriction has shown little or no tendency to return An occasional dilatation of the trachea with the forceps is sufficient to maintain the opening The respiration and voice are quite normal By following up the dilatation of the trachea in this manner when there is a tendency of the constriction to return, I have every reason to believe that a permanent cure will be effected

This has been to me an exceedingly interesting case, being one of chronic subglottic laryngitis, to which was added *organic constriction* in the upper part of the trachea This case is of special interest on account of the uncertainty as to the exact cause of the condition, and also on account of the history of repeated attacks of dyspnea extending over so long a period

How much of this trouble we may ascribe to albuminuria, it is difficult to say We all recognize the condition of edema of the larynx and aphonia, associated with albuminuria, which we term albuminuric aphonia, and we know that specific taints uncontrolled by ordinary antispecific remedies may excite all sorts of conditions Subglottic laryngitis is a disease that is not of frequent occurrence, and is therefore not commonly met with in our daily work We know, however, that its cause is frequently involved in obscurity, although it is usually associated with lymphatic affections and the conditions termed scrofula, that it occurs usually in young females from fifteen to twenty-five years of age, and that the treatment which proved serviceable in this case is the one that is recognized as the most beneficial in simple chronic subglottic laryngitis Simple absorption of the tissues of the nose without ulceration results only, so far as I am aware, from a specific cause We must therefore believe even in the absence of every other manifestation that the underlying cause was a latent hereditary taint of a specific character which produced the subglottic laryngitis and ulceration of the upper portion of the trachea and the resulting stricture, as well as absorption of the tissues of the nose

DISCUSSION

Dr J E Logan, Kansas City, Mo —Is it not probable that this case is more or less of a specific type? The Doctor states that it was simply a settling of the cartilaginous septum unattended by any ulceration, and that the bony septum was intact This would make it a very peculiar and interesting case I have seen many of those cases which had no evidence of external ulceration, but there would be an ulcerated condition of the septum

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A FEW REMARKS ON THE CLINIC USE OF ORTHO- AND PARA- CHLORO-PHENOL

Read in the Section on Laryngology and Otology at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY CONRAD BERENS, M D

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In the *University Medical Magazine* for October, 1894, there is a brief note of reference to ortho chloro phenol, quoting N Simanoffski, who is reported to have used it for reducing hypertrophies of the mucous membrane overlying the inferior turbinates of the nares Simanoffski made but a preliminary report, and referred also to para-chloro-phenol The endorse ment of ortho chloro-phenol was of such a nature that I was induced to make some trials with it, as well also as of para chloro-phenol Ortho chloro-phenol is a heavy limpid liquid of exceedingly irritating and pungent odor It is rapidly soluble for clinic purposes in glycerin, and from this may be reduced in strength again and made soluble in water For clinic purposes the para-chloro-phenol, which occurs in amorphous crystals, is best used by fusing to the end of a probe In my work I have fused the crystals to silver Para-chloro-phenol is not so satisfactory clinically, and is very much more cumbersome and inconvenient in its application The conclusions of Schourmo in regard to its irritating properties, particularly in laryngeal conditions, are fully borne out by clinic experience There is no denying the correctness of the statement of Spengler (*Brit Med Jour* 1896, No 1,827), as to its antiseptic properties, but I would take issue with him as to its efficacy compared with ortho-chloro phenol My experience having taught me that the latter is just as active an anesthetic, and is a very much more convenient form for clinic purposes The use of ortho-chloro-phenol for the reduction of engorgement of the erectile tissue overlying the inferior turbinates is much more satisfactory than the cautery—with less destruction of tissue and less intense reaction In acute engorgement of the erectile tissue, I have found nothing more satisfactory than its application by means of a small dossil of cotton dipped in the drug and applied antero-posteriorly to the parts after they have been prepared by the use of cocain The effect of the cocain having passed off after the thermo-electric cautery has been applied, patients as a rule complain of intense pain, and frequently of epistaxis, not to mention the enormous inflammatory swellings and frequent adhesions to the septum Ortho-chloro-phenol is slightly anesthetic, and this anesthesia is more persistent than that of cocain As a consequence after the action of the cocain has passed off that of the ortho-chloro-phenol continues, and the patient reacts without any inconvenience There being less inflammatory reaction it is natural that there should be less deeply seated initial lesions, but the drug has no place in the treatment of true hypertrophy, or hyperplasia of the region under discussion In ulcerous conditions more especially of the septum nasi, the application of the glycerole of ortho-chloro-phenol 10 per cent has invariably proved satisfactory in my hands In ozenatous conditions after freeing the nares from the offensive accumulations, and thoroughly cleansing the nasal mucous membranes with dry absorbent cotton, I have found nothing that will so quickly remove the offensive odor of the disease as two or three applications of 10 per cent ortho-chloro-phenol in glycerin In these cases I persistently but very gently rub the solution over the diseased parts, and the patient is much gratified by the sudden removal of the offensive odor of the disease I have yet to see however a case cured by the application of this or any other drug, that is, having no longer necessity for any applications to the nares In laryngeal conditions I found that it will not in any sense take the place of ichthyol or iodoform as a local application If a caustic effect is required, as for instance upon deeply seated ulcers or upon granulations in the pharynx, it is not to be considered, as its effect is too mild to be taken into consideration In laryngeal diseases the results of persistent application have not lead me to resort to its use excepting in the event of failure of lactic acid, ichthyol or boro-glycerin In three out of fifteen cases of laryngeal tuberculosis in its very incipiency, I have found ortho-chloro-phenol, in full strength, to give better results than any other local application In two instances, most gratifying results were obtained by the application of 10 per cent ortho-chloro-phenol to large ulcers of the epiglottis, both occuring in cases of advanced tuberculosis

For the removal of growths of any sort in the larynx, I would not encourage the use of the drug, as it is not only slow, but also liable to cause acute inflammatory reaction—in one instance, giving rise to very severe dyspnea In aural diseases its use has been attended by more gratifying results than those gained by the use of any other drug The application of a pledget of cotton saturated with the 10 per cent of the glycerol of ortho-chloro-phenol to an incipient furuncle of the external canal, in many instances has resulted in the abortion of the disease, while no dressing has proved more satisfactory after I have been compelled to open the furuncle in the canal Though I have used a dossil of cotton saturated with it as a dressing after opening the furuncle I have never yet seen a recurrence of the disease at a sufficiently early date to warrant me in believing that there had been any material allowed to remain in the ear disinfected A small pledget of cotton saturated with the solution and applied to the point of attachment after removal of polypi of the external canal, has always proved effectual both in destroying the extremely offensive odor, and in encouraging a rapid healing of the parts In suppurative otitis media it has proved exceedingly effectual in 10 per cent in glycerin I will cite but one case as an illustration of many Miss E M, aged 22, applied to me in July, 1893, with chronic suppurative otitis media of the right ear, more than two-thirds of the inferior portion of the membrana tympani had been absorbed The suppuration had continued with more or less severity and an offensive odor, since the early childhood of the patient I employed every method for the relief of the symptoms and checking the disease, even curetting the floor of the middle ear, where the disease seemed to be confined, the attic not appearing to be involved Boro-glycerin in 50 per cent solution, ichthyol, nitrate of silver, zinc, nitrate of sanguinaria, douches, powders as iodoform, aristol, etc, were used without result The discharge continued to be offensive and muco-purulent in character, no matter how thoroughly the application at the previous visit had been made In December, 1894, after having thoroughly cleansed the parts I inserted a pledget of cotton saturated with 10 per cent ortho-chloro phenol in glycerin The patient was instructed to return the following day To my surprise the entire appearance of the parts had changed, the mucous membrane had become more healthy in appearance, and the discharge had lost its odor and golden yellow color In five days and after three applications the discharge entirely ceased, and has not recurred since, excepting in the spring of 1895, when the patient was attacked by an acute rhinitis, and three days afterward complained of discharge from the ear A single application of ortho chloro-phenol caused this to cease after twenty-four hours and there has been no discharge [illegible] uent as a rule complains of consid [illegible] on the first introduction of the [illegible] e drug, but this rapidly subsides and leaves a sense of comfort It has been my custom to dress the ear daily, or not later than every other day, and in no instance of chronic suppurative otitis media have I had any but the most gratifying results in its use In acute suppurative otitis media I have found that in any strength it seems to aggravate the disease The greatest objection raised to the use of the drug comes from the patient, who complains of its odor Even weak solutions of the drug unquestionably give rise to an all-pervading and pungent smell that is more penetrating than that of iodoform This objection, particularly in the application of the drug to the ear, may readily be overcome by closing the external meatus with a small piece of absorbent cotton In conclusion then, I have no hesitation in recommending the further clinic use of ortho-chloro-phenol in the belief that it will prove a valuable addition to the pharmacopeia of the rhinologist and aurist, and prove itself worthy of the fullest confidence, especially in those cases where the commonly resorted to medicaments have not only failed to relieve the patient, but have disappointed the expectations of the surgeon

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THE ELECTRO-CAUTERY SNARE AS AN EXCISING AGENT IN DISEASES OF THE NOSE AND THROAT

Read in the Section on Laryngology and Otology at the Forty seventh Annual Meeting of the American Medical Association held at *Atlanta, Ga, May 5 8 1896*

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ST LOUIS, MO

It is only a natural sequence which impels one who has given the electro-cautery snare a trial for the treatment of one of the various conditions for which it is recommended, to extend its application, to find new uses and to confirm those whose work has forced them to admit its growing utility Especially is this to be expected in view of the recent improvements in electric appliances

At the meeting of the American Medical Association at Detroit in 1892, I presented an electric snare which[1] I had devised, and stated its indications and uses in nose and throat diseases Since that time I have, by greater opportunity, enlarged its sphere of usefulness and fixed my own views in favor of a wider range of application of the electro-cautery snare in nose and throat affections From its very nature it is adapted for amputation or excision Any organ or growth or portion thereof which can be engaged within the snare may be removed, without danger of hemorrhage, for not only will there be less hemorrhage than when a knife or cold snare is used, but absolutely no bleeding in the vast majority of cases

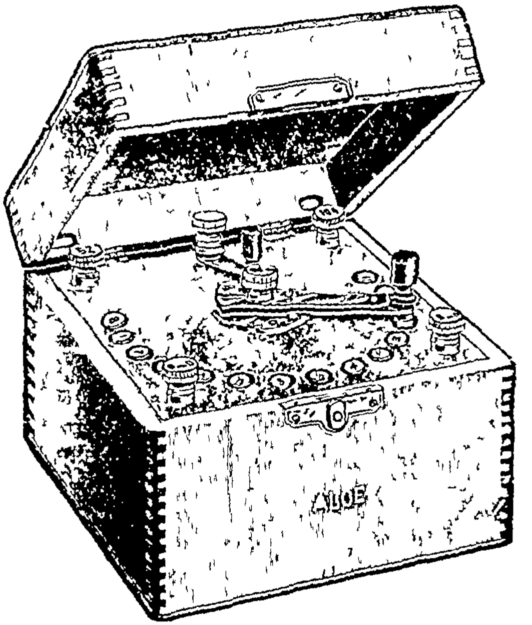
The snare, which was exhibited before this body four years ago, I again present though it is unmodified, except, that in order to accommodate the increasing field of application, it has been made in two sizes By reason of its ready separation, its simple construction and its constituents, it is easily cleaned Being covered with hard rubber it is not open to the objection which the old time snares received on account of their lack of cleanliness

Until over three years ago, I relied upon the ordinary galvanic and storage batteries, without complete satisfaction, constant attention was required to keep them in order and even when the greatest care was observed the battery would often fail at the critical moment

In December, 1892, I began to use the Aloe converter and since that time I have never been subjected to any annoyance on the part of the appliance supplying the current The converter is applicable only to the alternating current and is similar in its design and purpose to the transformers which are now used to reduce electricity of high electro-motive force to a lower tension

The instrument which I have, reduces the voltage from 104 to 1, $1\frac{1}{2}$, 2, 3, 4, 5, 6, 7, or 8 volts, and is therefore suitable for the cautery or the light

In construction, it consists of iron core with a large primary coil of fine wire and a smaller secondary coil The ratio of turns of the wire in the primary and secondary coil will depend upon the transformation required Thus when the voltage of the house current is 104 to secure one volt the primary would have 416 turns to 4 of the secondary, for 2 volts the ratio would be 416 to 8, for 4 volts, 416 to 16, for 8 volts 416 to 32 From $4\frac{1}{2}$ to 6 amperes are required for the proper action of the snare with No 5 piano wire ($\frac{1}{3}$ mm in diameter)



Lichtwitz[2] describes a fairly elaborate instrument which he uses and which he presents as one by means of which the quantity of electricity may be measured He finds that ten amperes are necessary for ordinary tonsils and twelve for the larger, when the wire used is $\frac{1}{3}$ m m in diameter

There are several very good appliances in use for utilizing the constant current which alone is available in some cities

It therefore follows that at the present time no one need deny himself the use of the electro-cautery snare on account of electricity producing apparatus, for, whether the current be alternating or direct the supply will be reliable and precise For some years a valid objection was entertained to the platinum wire on account of its lack of firmness Since iron or steel wire has replaced it however, the same degree of stiffness of the loop is obtained whether the cold or hot snare be used

The electro-cautery snare is from the very nature of things of but recent use So far as I can learn Middledorf was the first to employ it in the removal of tonsils

According to Kijewski and Wroblewski[4] the galvano cautery snare was used by Koehler and Korzeniowski to remove a large polypus which filled the entire nasal cavity Voltolini,[6] in his great treatise upon the galvano cautery considered the value of the snare lessened by reason of the insufficiency and inconstancy of current

Since the publication of this work and especially since the introduction of an apparatus which provides for the regular and certain supply of electricity, this and the somewhat similar objection of Beverly Robinson[7] are answered So satisfactory has been this answer that the advocates of the electro cautery snare have increased immensely, until they include many who are willing to replace by it many operative procedures which legend and practice had almost established forever In fact the most enthusiastic advocates are those who have had most experience with it and its greatest opponents are generally those who have used it infrequently or not at all

Thus Sendziak[8] complains that Jurasz, after employing the electro cautery snare in only two cases, came to the conclusion that it was inconvenient, painful and disagreeable to the patient on account of the odor it leaves

The electro cautery snare has been recommended and employed in the following diseases of the nose and throat

1 Nose *a*, anterior and posterior turbinal hypertrophies *b*, polypi and other benign growths, *c*, malignant neoplasms, *d*, spurs
2 Rhino-pharynx *a*, polypi, *b*, fibromata
3 Pharynx *a*, hypertrophied tonsils *b*, tonsillar neoplasms, *c*, palatal neoplasms, *d*, elongated uvula, *e*, hypertrophied lingual tonsils
4 Larynx *a*, neoplasms

I NOSE

1 *Anterior and posterior turbinal hypertrophies*—In these conditions the electro-cautery snare is almost ideal, permitting the operator to remove quickly the redundant and hypertrophied tissue by means of an operation which is bloodless notwithstanding the great vascularity It is quite as easy to engage the hot as the cold snare and the celerity, the painlessness and freedom from hemorrhage should commend the former over the tedious cold snare

Sajous[9] prefers the electro cautery snare for posterior turbinate hypertrophies, stating that it is necessary to use a rhinoscopic mirror in order to see the seat of operation I consider that this is not only unnecessary, but awkward A far better plan is to place the finger in the rhino-pharynx and thus guide the loop over the hypertrophied tissue

McBride[10] says it should be used whenever the tissue can be engaged and Greville MacDonald[11] prefers the electro-cautery snare for the removal of large pieces of the turbinated in spite of the objection that it induces considerable inflammation in the neighborhood from the generation of steam and that the cicatrization is delayed I can not permit this objection to go unchallenged for at least in my own cases it has not been revealed Among the laryngologists who consider the cold snare as superior for anterior and posterior hypertrophies, may be mentioned Onodi,[12] Zwillinger,[13] Polyak,[14] Eaton,[15] Hack,[16] while Baumgarten[17], Schmidt[18] and others commend the hot snare

2 *Polypi and other benign growths*—The essential advantage of the electro-cautery snare in the removal of polypi is the fact that so many may be removed at one sitting, whereas it requires considerable time to dispose of a number by means of the cold snare, with the hot snare it is only the question of a few minutes The smaller instrument which I have devised is quite as convenient and easy of application as any cold snare, and one needs only inquire of a patient who has had both methods applied, to learn that the hot snare is far more agreeable, less painful, more rapid, less bloody and more preventive of recurrence So far as the inflammatory and infective sequelæ are concerned after a thorough trial of more than four years, I am convinced that they are no greater in one than in the other In one single case, an acute otitis media followed the separation, doubtless influenced by the unwarrantable exposure to which the patient subjected himself The operation was performed in the morning and before night the patient had permitted himself to be drenched by rain several times He failed to report at my office until the fourth day after the operation I feel therefore that the hot snare may be held blameless of this result Surely the lessened time of operation should make infection less apt to occur than with the cold snare with which too often no aseptic and antiseptic precautions are taken

McBride[10] in this connection makes the assertion that it is better to use the electro cautery snare, when it is desired to remove all the polypi at one sitting Ingals[19] uses the electro cautery snare but prefers the cold while Greville MacDonald[11] claims that there is no advantage over the cold snare, while there is the greater disadvantage of inflammatory action induced by heat and steam generated by the hot wire

In answer to this, it may be stated that the heat and steam which MacDonald and others claim are generated will not produce any bad results if the snare is properly applied and used If the wire is drawn tight the tissue which is influenced by the heat will be so constricted and the time of its application so insignificant, that it can have but little influence in this regard It is often difficult, sometimes impossible, to observe the cauterized stump, demonstrating that at least in many cases the effect of the heat and steam is *nil*

Schmidt[18] states that after using the cold snare for three years he returned to the electro-cautery This, I am sure, will be done by many if they give the latter a fair trial I am inclined to agree with Ball[0] and others that cauterization of the base resulting from the galvano cautery ablation of polypi is productive of good results In keeping with the progress of rhinology, I do not believe that mere cauterization of the base will prevent recurrence Indeed my common practice now is to remove all larger polypi with the hot snare, and if the bone is found affected the smaller polypi with the diseased bone are then removed

The electro cautery snare is also available for the removal of other benign growths in the nose, and I have used it with good effect in fibroma, adenoma and papilloma In one case of fibroma, which projected from the rhino-pharynx, the vascularity was very great, the growth bleeding upon the slightest provocation yet, the electro-cautery snare caused the loss of but a few drops of blood In the case of adenoma I first used this instrument but in the later recurrences abandoned it, since on account of the softness of the tissue and slight amount of blood which was lost, I could operate quite as well with forceps

Zarniko[21] inclines to the cold snare for removal of inflammatory fibroma, claiming that if it is applied as he suggests, the loss of blood will be inconsiderable

3 *Malignant tumors*—The electro-cautery snare has in this class but a limited range, which is in the direction of securing a portion of the growth for microscopic examination

4 *Spurs*—Although advocated by a number of laryngologists, I have never taken kindly to this form of treatment The saw, drill and curette are eminently more satisfactory The electro-cautery snare is by no means as free from objection in operations upon bone and cartilage as upon softer tissues

II RHINO-PHARYNX

1 *Polypi and fibromata*—These may well be considered together as the terms are used interchangeably by many In appropriate cases the belief seems to be fairly general that the hot snare is of greatest service, although the electrolytic treatment seems destined to overshadow all other forms, except where a more serious operation is indicated However, many still maintain the superior value of snaring where this is possible Thus Michelson[22], Lincoln[23], and Schmidt[20] report cases of rhino-pharyngeal fibroma treated in this way I have used the electro-cautery snare in two cases of rhino-pharyngeal polypi with success and without return In a case of rhino-pharyngeal fibroma with projections into the nasal cavity I snared off as much as was possible to reach with the instrument On the whole the efficiency of the electro-cautery snare in rhino-pharyngeal tumors depends upon the possibility of engaging the growth in the loop and its extent and attachment

III PHARYNX

1 *Hypertrophied tonsils*—In the removal of hypertrophied tonsils, the electro-cautery snare has received greater attention than in any other affection After this method was introduced, according to Lichtwitz[2] the operation lost caste but was revived through the writings of Knight, Loeb, Garel, Schmidt, Heryng and Sendziak All of these continue to favor the electro-cautery snare except Knight, who writes[24], after a complete resumé upon the subject of hemorrhage following tonsillotomy that he favors the guillotine

Flatau[25] intimates that those who have experienced serious hemorrhage after tonsillotomy are much inclined to replace the tonsillotome with the electro-cautery or electro-cautery snare and McBride[10] states that its use is only justifiable in preventing hemorrhage, which he states is a rare contingency Bresgen[26] dismisses its consideration with the remark that there *is no reason* for its use as it does not prevent hemorrhage Bosworth[27] objects to the procedure on the ground that it requires ten to fifteen minutes and Potter[28] advised that the snare be not adjusted too deeply on account of the sloughing beyond the seat of cauterization

Ingals[19] favors the cold snare On the other hand there is a great array of experienced advocates of electro-cautery tonsillotomy Lichwitz[2] is strong in his preference Yerwant[29] states that it is more prudent to use the electro-cautery snare in adults so as to obviate hemorrhage Heryng[30] has given his evidence in its favor for hard fibrous tonsils, extensive hypertrophy and hemophilia Sendziak[18] advocates it forcibly and conclusively, stating that any one without prejudice will be *entirely satisfied* with this method Schmidt[18] favors the electro-cautery snare beyond all other tonsillotomy instruments He denies that it requires a longer time than the operation with the tonsillotome and insists that it is to be preferred on account of the certainty that hemorrhage will not occur Huguenin[31] advises the use of the electro-cautery snare whenever tonsils are pedunculated and Helot[3] also prefers this instrument There is to my mind no question as to the safety of galvano cautery tonsillotomy so far as hemorrhage is concerned A few cases of hemorrhage following this operation have been reported, but never a serious one They could all probably be explained upon a satisfactory basis In more than 300 tonsillotomies with the electro-cautery snare I have nerver observed a loss of more than a few drops of blood In only one case was there a secondary hemorrhage, which doubtless resulted from a lack of attention on the part of the patient I think this will compare favorably with the experience of those who use the knife or tonsillotome In fact the proof is stronger when it is considered that the hemorrhage would be far greater if the advocates of the knife would remove as much as is ordinarily removed with the galvano cautery snare

Numerous instances of hemorrhage after tonsillotomy attest to the possible seriousness of such an occurrence Heryng[30] collected fifty-nine cases of severe and even serious hemorrhage, other cases have been reported by Blairs,[33] Fuller,[34] Catuffe,[35] Moure,[36] Thorner,[3] Jessop[38], and Lennox Browne[39]

Another great advantage which the galvano-cautery snare possesses over the tonsillotome consists in the large amount of tonsillar tissue which it is possible to remove and the precision of the operation which makes it possible to remove just what one desires With the tonsillotome the amount of tonsil removed is purely accidental If the instrument possesses a fork or lifting device, the amount will depend upon the pulling power of the fork, which to the surgeon can not be known until after the excision If there is no fork, the pillars of the palate will limit the removal, and therefore it must be very exceptional to remove the entire tonsil Quite different is it with the electro-cautery snare It is my custom to pull the tonsil from its palatal bed by means of a pair of sharp-toothed forceps and then engage the wire so that it is possible to remove the entire tonsil I have again and again made so complete an excision that not a vestige of tonsil tissue remained This I do not consider a dangerous practice, at least it has been eminently satisfactory up to the present time I can corroborate the experience of Schmidt,[18] who states that he has frequently seen enlarged tonsils of which one-fifth only had been removed by previous tonsillotomy

As to the great length of time which some writers maintain is necessary in operating with electro-cautery snare, the expression is born of inexperience, for no one who undertakes it a number of times can fail to acquire sufficient dexterity to operate with celerity It never should require more than one minute, providing the apparatus is in proper working order, considering the improvements that have been made, nothing short of this is to be anticipated On the whole it must be admitted that the electro-cautery snare is to be commended for the removal of hypertrophied tonsils in that it obviates all danger from hemorrhage and makes the operation one of precision, not one of the purest guess-work

Even in tonsils which are impacted between the palatal pillars it will be found of service, since in almost every case it will be possible to pull out a portion and engage it in the snare, thereby not only securing the advantage of cauterization, but also the removal of a portion of the hypertrophied tissue

2 *Tonsillar neoplasms* —Any tonsillar growth which has not involved and attached itself to neighboring structures is susceptible of excision with the electro-cautery snare This does not imply that the mere removal with the snare will constitute a cure for such an affection However, if the growth involves the tonsil alone, and the entire tonsil is removed, the method should offer at least as good a result as any other In a case of lymphosarcoma of the tonsil I snared off a large piece of the tumor for microscopic examination, without causing any hemorrhage and without influencing the growth of the tumor Wolfenden[40] states that he removed a sarcomatous tonsil by means of the electric snare, and I consider it a procedure which should be utilized in the earlier cases

3 *Palatal neoplasms* —Tumors of the palate which may be engaged within the loop are suitable for removal with electro-cautery snare I have used it twice for palatal papillomata

4 *Elongated uvula* —In my previous paper[1] I called attention to removal of elongated uvula by means of the electro-cautery snare, which I had practiced for some time Shortly after this DeBlois[41] in a paper before the American Laryngological Association, took a similar position Lennox-Browne[42] states his preference for the galvano-cautery where the uvula is thin, but he does not specify the snare He operates by pulling the uvula downward and cutting it with the galvano-cautery where he desires On the other hand Morgan[43] and Ingals[19] prefer the cold snare That hemorrhage is a possibility, one needs only to refer to the paper upon this subject written by Morgan[44] in which attention is called to a great number of instances of uvular hemorrhage collected from ancient and modern medical literature

Besides entirely preventing all possibility of hemorrhage the hot snare operation finds an indication in the ease with which the uvula can be engaged, the perfect stump which remains, the smaller amount of pain succeeding the operation as compared with ordinary uvulotomy It is my practice after the uvula has been properly cocainized to permit it to fall into the loop and after deciding exactly where the section is to be made, to draw the wire tight and send the current through So pleasing are the results from this method of operating, that I now use no other plan

5 *Hypertrophied lingual tonsil* —My own experience in this particular affection is confined to one case, however, it seems to offer an inviting field at least Sendziak[8] commends it highly

IV LARYNX

1 *Neoplasms* — Some writers are disposed to favor the electro-cautery snare in these affections, but it seems to me that there are serious objections on the score of inaccessibility, impossibility of keeping the site in perfect view, the danger of inflammatory reaction and the possibility of the excised tumor falling into the larynx These are, however, the judgment of opinion rather than of experience

In conclusion I desire to state that the electro-cautery snare has a possible indication in laryngeal tumors and nasal spurs, an inviting one in hypertrophied lingual tonsils, palatal, tonsillar and rhinopharyngeal growths and a certain one in the removal of hypertrophied tonsils and turbinates, nasal polypi and elongated uvula

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DISCUSSION

Dr W E Casselberry, Chicago Ill —I think the success of treatment by the electro cautery snare depends very largely upon the perfection of one's apparatus I think that Dr Loeb deserves a great deal of credit for having designed an apparatus by which he can *gauge and perform* these *operations* with facility He is fortunate in having his converter and an alternating current I have been unable to find a satisfactory galvano cautery rheostat by which to use directly the Edison or continuous current, so I use the storage battery I use for this *purpose* the double American cell, keeping it stored constantly by the Edison current in connection with my light so that the flow of the current from the battery seems to be uniform I am not accustomed to take out nasal polypi with the cautery snare I formerly did it but have stopped *for* the reason that it makes the nose sore I can remove about as many as I care to at one sitting with the cold snare I remove tonsils in adults sometimes by the cautery snare It has the advantage of avoidance of hemorrhage *and the* disadvantage of making a very sore throat I think, to remove the uvula by the cautery snare, I must make a more painful wound than by the usual method

Dr Hanau W Loeb, St Louis, Mo —**I expected** to h more criticisms than have been made and would have been deserved, for I am sure that my love for the electro cautery snare has made me rather dogmatic I use a better instrument than those usually employed Most of the instruments have too large a handle and are too heavy, but I have somewhere in the gray matter of my brain a little handle in view which will greatly obviate this trouble

I think Dr Casselberry deserves a great deal of credit for his faithful work with that abominable machine, the winding cautery snare I use the McIntosh handle, which has a sliding arrangement by which the loop is tightened in a moment

It is unfortunate that in so many cities the direct current is still used Since the consolidation, however, of the Edison and Thompson companies, they are not using them so much, and soon the alternating current will be utilized in all of the larger cities In reference to trouble from cauterizating the adjoining part, if the wire is drawn tight before sending the current through this will be obviated The trouble with the instruments is that you have to pass the wire through the cannula and then back again In mine there are two perforated wires which are threaded like a Sajous snare

There is no question but that in many cases the inflammatory reaction from the electro cautery is greater than the cold snare, for the reason that the surface is free from all germs; since I have become more familiar with the use of the instrument I have severe inflammatory results less frequently It is the best in operating upon the uvula because one is not required to pull down the tip in any way I simply let the uvula fall into the tip and turn on the current In the scissors operation you are apt to cut off more than is necessary of the mucous membrane, and in addition the inflammatory results are greater I have presented this paper because there is a scantiness of literature in regard to the cautery snare for operations in the nose and throat I hope that when we next speak on the subject, I will have more in favor of it

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ON BONY GROWTHS INVADING THE TONSIL

Read in the Section on Laryngology and Otology at the Forty seventh Annual Meeting of the American Medical Association, at Atlanta Ga May 5 8 1896

BY ALEX W STIRLING, M B, C M (EDIN), D P H (LOND)
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The cases which I bring before you are interesting, I think, from the points of view of both the anatomist and the practical surgeon

The first is that of a young lady of excellent personal medical history Her only complaint had been slight chronic hypertrophic rhinitis, and for a few years some enlargement of the tonsils, especially the right, both of which secreted caseous matter and were at times a little painful The inferior turbinated bones and the varicose veins of the lingual tonsil had been cauterized by one throat specialist, another had cauterized her right tonsil, and a third had cauterized cysts in both

When tired she frequently complained of pain which she believed originated in the right tonsil and radiated thence to the mastoid and the right nasal bones, as well as to the right eye and shoulder When squeezing out secretion she could feel a local tenderness in this tonsil

On examination with the finger I was able to make out a hard immovable mass coming from behind the tonsil forward underneath it to the level of its anterior surface, but forming practically part of its substance Its point is rounded, apparently about one-eighth of an inch in diameter, but becoming broader and somewhat flattened laterally as it extends outward, backward, and slightly upward The finger pressed in front enters an angle formed by it and the inferior maxilla, and when pressed behind it enters another angle formed by its approximation to the right side of the vertebral column The tenderness felt on pressure appears to be due to the nipping of the tonsillar mucous membrane between the finger and the hard body *Nothing of the kind can be discovered on the left side*

The second case consulted me on account of large polypi of both nostrils from which she had suffered for years She is 64 years of age, has asthma and a weak cardiac muscle, but otherwise is in good health There is nothing of note in her family or personal medical history On examining her throat I observed a slight protuberance just above and in front of her right tonsil With the finger I found it to be nearly the same as that described in connection with Case 1, with the following points of difference In the second case it exists on both sides, though it is not quite so prominent upon the left side, it is also higher, farther forward, perhaps a little thinner, and with a more apparent upward direction

The growth is quite immovable, and there is no unnatural tenderness on examination The patient has never had the slightest trouble with her tonsils I have been able to examine the throat of one of her daughters, but could find nothing unusual there

The third case is a brother of Case 2, aged 65 He likewise has been free from throat affections or any infirmity which might have a bearing on this subject On both sides he has the same peculiarity, but differing from the previous cases in that the hard masses are altogether in the posterior part of the tonsils, are much longer, reaching a full finger breadth below the level of the lower tonsillar border, are perhaps rather more slender and, for nearly half an inch of the lower end on either side, cartilaginous to the touch and movable

The question now arises, what are these substances? They are evidently not tonsillar calculi, because they have none of their characteristics except tenderness In view of the fact that they have given rise to no symptoms whatever in two cases, and from their formation, position, and immobility, it seems to me certain that they are not the result of disease, but that they are rather congenital peculiarities, having however a distinct interest in cases of disease in their neighborhood

In endeavoring to come to a decision relative to their origin, let us examine the bony structures from which they might arise, for they can be nothing else than bone They all arise on the outer side of the throat, and it may be from the lower jaw, the vertebral column, or the base of the skull If they came from the lower jaw to which they closely approximate, they would move along with it, but not one of them does so They do not come from the bodies of the vertebræ, because the finger can exclude these The pterygoid plates are too far forward, the spines on the posterior extremities of the wings of the sphenoids are rather less unlikely, but they too are somewhat too far forward and are distant It is much more likely that the growths are simply prolongations of natural prominences than entirely new formations, by a process of exclusion we are limited to the transverse processes of the vertebræ and the styloid process

The tonsil is situated on the level of the upper part of the body of the axis or of the disc between it and the atlas The transverse process of the axis is small and does not move on rotation of the head The bones under consideration do move along with the head on rotation, and come into much greater and visible prominence when the head is turned toward the side opposite to that under examination

We are therefore reduced to the atlas which is as regards rotation of the head a part of it and the styloid process To which of these the bones belong is a question of interest chiefly in view of the possibility of their becoming carious or involved in an operation, for disease affecting the styloid process might spread to the main body of the temporal bone, and the delicate structures in relation with it, and if the atlas were in any way injured at least a serious condition of things might arise

Upon this atlas, kindly lent to me by Dr Grandy, with this skull, the posterior limb of the transverse process which ought to, but does not, join with the anterior to complete a foramen, is nearly an inch in length, and were it longer would reach the region of the tonsil if its curve were continued, or were a little accentuated and its direction would correspond fairly well with that of the growth especially of the first case

The direction and size of these growths afford no satisfactory point for differentiation Neither does the movement of rotation, and the only way to distinguish between them, of which I have been able to think, is that the skull proper moves when the head is nodded which is not the case with the Atlas These bones move with the head on nodding, and I therefore conclude that they are styloid processes Other arguments in favor of this view are the presence of cartilaginous terminations in the case of the male patient, and the well-known variability in length of the styloid processes I have been able to obtain little or no assistance from literature in making my diagnosis Among the books on anatomy and diseases of the throat which I have been able to consult, I have found only one reference to such a condition as this A few cases of exostosis of the bodies of the vertebræ, having no resemblance to these, have been recorded Three widely-known specialists on throat diseases with whom I have been in correspondence, and one of the most experienced of European anatomists have all informed me that they have never seen such a condition as I described to them

The one reference to any such which I have seen is in Schech's book on diseases of the mouth, throat and nose He refers to a case "described from the anatomic point of view by W Gruber," and another from a clinical aspect by Lücke, while Weinlechner is said to have broken away a piece of bone which caused inconvenience in swallowing These are recorded as abnormally long styloid processes

This condition of the tonsil is not to be looked upon as a mere anatomic curiosity, for in two at least of my three cases an attempt at tonsillotomy might have been met with considerable difficulty had a correct diagnosis not been previously made, and it might be of consequence in other operations in that region As regards treatment, there is no necessity to interfere in the cases of the elderly people The tonsils are troublesome in the first case, and it is a question whether removal of part by the guillotine, cautery or otherwise, or even the breaking up of it with a blunt hook might not result in so tightly stretching the mucous membrane over the bone as to produce pain or even ulceration and exposure of the osseous tissue Personally, unless in case of urgent necessity, I should be averse to removal of the latter on account of possible secondary mischief in the bone, or of interference with the attachments of muscles and ligaments

DISCUSSION

Dr W E Casselberry, Chicago, Ill —I saw these very interesting cases The first case to which he has reference, is a very distinct pointed prominence on the right side occupying the location of the anterior pillar, which covers it more than the tonsil, although when it is stretched forward the tonsil will cover it The curvature inward and the position would satisfy me that it was a styloid process turned inward toward the throat The other case had much the same condition but is not so pronounced The committee agreed that the case was an abnormal styloid process It is of some importance in connection with possible operations on the tonsils In regard to operating, laryngologists should take palpation more into consideration Upon palpation they would discover that there was something of a hard nature and would be warned against operating I do not think anything serious would occur if an operation was attempted, I think the instrument in both cases would slide over the projecting point rather than go through it I would not make a tonsillotomy in that case or cauterize it, because the somewhat enlarged tonsil affords a useful padding to the short pointed projecting styloid process

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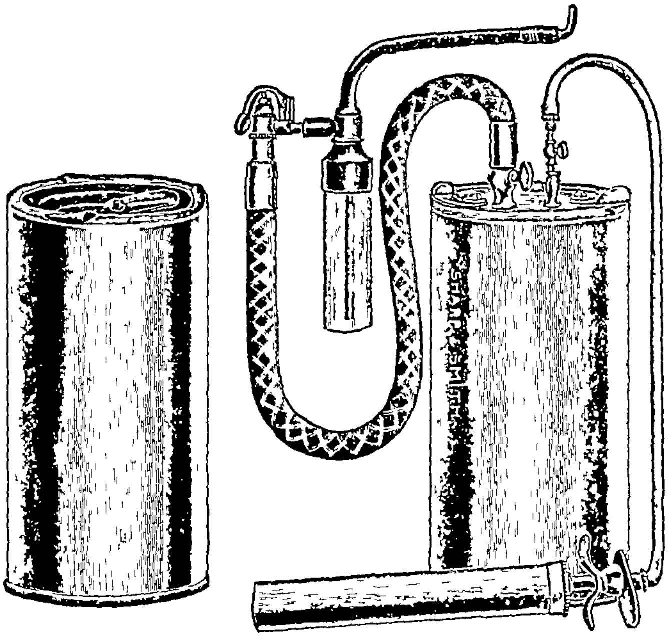
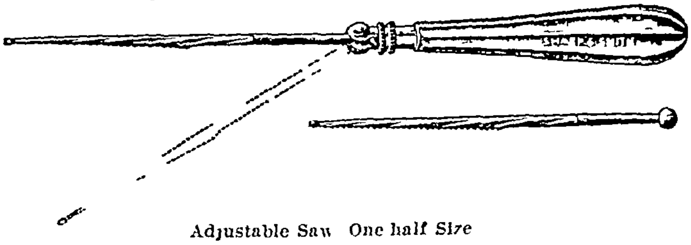
PORTABLE COMPRESSED AIR APPARATUS AND NASAL SAW

Presented to the Section on Laryngology and Otology at the Forty seventh Annual Meeting of the American Medical Association, at Atlanta Ga May 5-8 1896

Dr E Fletcher Ingals, Chicago, Ill , presented a portable compressed air apparatus, with the following remarks This is a compressed air apparatus designed for treating patients where we are obliged to carry an apparatus with us, as for instance in going to theaters to treat actors, or for the use of patients who need a high air pressure for making applications to the larynx or Eustachian tubes It consists of a cylinder eight inches in length and three and a half inches in diameter, capable of withstanding eighty pounds pressure The cylinder has a movable head that will slide in so that the spray tube, pump and all other parts of the apparatus may be placed inside the cylinder when not in use To use it the [illegible] up against a rim with a rubber washer [illegible] by clamps that make it air tight. The [illegible]



Portable Air Compressor, One quarter Size



Adjustable Saw One half Size

feet in length, so that the patient can hold the cylinder in the lap while the application is being made A bicycle pump is employed, which is of convenient size to go inside the cylinder when packed, but is of sufficient size to enable one to easily obtain forty pounds pressure The cylinder filled with compressed air by this means holds sufficient to throw a strong spray the length of time necessary for treating five or six patients

The price of this first apparatus, without a case was $15, but as more are made the manufacturers say they can be furnished in a leather case with space for a reflector, throat mirrors and extra solutions, if desired, for $15 The case complete with the extra space for other instruments will measure only eight and one half inches in length, four inches in width and five inches in height, or without space for head mirror will measure eight and one half inches in length, four inches in width and four inches in height

Dr Ingals also presented a nasal saw with an adjustable handle that could be set at any angle The instrument was provided with two blades, one to cut forward the other backward It had proved very satisfactory It was made entirely of metal

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HYSTERIC DEAFNESS

Read by title in the Section on Laryngology and Otology, at the Forty
seventh Annual Meeting of the American Medical Association
at Atlanta Ga May 5 8 1896

BY H V WURDEMANN, M D

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MILWAUKEE WIS

That protean affection, hysteria, may be considered a purely functional disease There is, however, usually some concomitant affection or lesion which may be deemed to be the cause This may excite a local hysteric attack in a patient predisposed by mental or moral influences Some actual injury or shock to the part is in many cases the predisposing cause for the local manifestation Affections of the sight are frequently seen, indeed, in most hysteric persons it is possible to find some defect of the visual field

Hysteric deafness is very rare In the *Medical News*, Feb 14, 1891 I reported such a case Since that time two more have come to my notice

Case 1 —Hysteric deafness and blindness in a woman after injury to the head

Aug 29, 1892, a woman, age 42, was sent to me on account of monaural deafness She gave a history of a railroad accident a few days before in which she had been struck on the left side of the head, had been prostrated and in bed after arrival in this city She claimed to have had severe pain in the left ear the day before and discovered that this was totally deaf

Status Presens Patient very nervous and excited There was a contusion with swelling over the left orbit and malar bone of same side, which patient thought was broken, but examination showed no evidence of fracture The vision of this eye was slightly reduced for distance and she claimed that she was not able to read ordinary print Objective examination of the eyes was negative, the refraction and fundus normal, pupillary reaction and pupils normal Contraction of the visual field on the affected side Examination of the ear showed a normal drumhead and no visible cause for the pain or deafness She could only hear loud sounds on this side That of the right was normal Tuning fork placed on vertex was heard only on the right side and not at all on the left by aerial or bone conduction There was no tinnitus or aural vertigo at this time Two days later the left ear appeared totally deaf She complained of great pain in the back and leg of this side and of hypresthesia She asserted that the whole of this side was weaker than the other Objective examination showed left hemihyperesthesia and a questionable hemiplegia Treatment advised was absolute mental and bodily rest with bromid of kalium and valerian Diagnosis at the time was hysteric deafness the locality of the functional disturbance being probably influenced by the character and place of the contusions A prognosis was given of probable recovery either after the effect of the primary shock had passed away or after the lapse of some weeks

One month later I examined her again, finding that she could hear a loud voice but could not understand spoken words on the left side, hearing on right side normal as on first examination Objective examination negative Tuning fork only heard on the right when placed on the vertex She was excitable and had an anxious countenance and complained of pain in the back of the head with creepy sensations and weakness on the left side of the body Also had pain in the ear and roaring sounds which were immediately relieved by weak galvanic electricity Patient had a fainting fit in the street car on returning home from my office The vision was blurred for reading in both eyes in a few minutes There was now no contraction of the visual fields and the vision was normal for distance About three months later the railroad company having settled with a moderate sum for damages, the hearing gradually came back to the affected side, and examination one year later showed that it was normal

Case 2 —Hysteric deafness and blindness in a child after pulling the ear

Nov 9, 1893, an anemic child, aged 11, had trouble at school several weeks before when the teacher pulled her right ear She became totally deaf on that side and partially so in the left within a few hours, complained of her sight and was light shy Was given near sighted glasses (—1 D) by a jeweler, with which she claimed she could see better, and without which she kept her eyes closed

Status Presens The child was apparently apathetic and stolid The right concha was red and exquisitely tender to the touch caused, as I observed, by furtively pulling the ear when she thought she was not being watched The membrana tympani were normal She has slight hypertrophic rhinitis for which the mother had been douching the nose with a syringe and salt water Patient could not understand what her mother said, although she had been shouted to for a couple of weeks, but she was apparently observant of our conversation On taking the child aside I found that she understood me when I talked in an ordinary tone of voice All tests for hearing were useless

Her vision was R and L 6-18 with her glasses and without them she would not read any letters I explained the case to the mother and commenced at once to make a decided mental impression upon the child, *i e*, to hypnotize her I told the mother in the child's presence, in a manner to give her the impression that I did not wish the patient to hear what I said, "that I was about to do an operation that would cure her at once" The child seemed apathetic but responded to the usual *hypnotic suggestions and on brisk Politzerization* with chloroform vapor, could immediately hear ordinary conversation, her mother's voice as well as mine Hearing tests showed that she could hear the acumeter, the watch, whisper, voice and tuning fork at a normal distance and in a normal manner, besides this she could read all the test letters to 6-VI without glasses These were taken away from her, but a subsequent examination showed that the eyes were 1 D hyperopic The child would not allow of a second Politzerization without hypnotic influence, but the effect of the one given was sufficient to cure the case Tonic treatment was instituted, and as long as the case was under observation (six months) no return of the hysteric symptoms recurred

I can not ascribe either of these cases to malingering entirely, although in many cases of traumatic hysteria there is a tendency toward deception It is probable that the disturbances of special sense in both cases were entirely beyond personal control and were only to be cured by outside suggestion The first case would not submit to such treatment, but in the second it was thoroughly successful I have seen other cases of hysteria relieved in quite as remarkable a manner

805 Grand Avenue

Amblyopia Consequent to Chronic Endometritis —Monte Mor describes in *O Brazil Medico*, August 1, a case of almost total blindness accompanying chronic uterine disturbances Dilatation and curettement with antiseptic injections, etc , cured the endometritis in fifteen days, and with it the amblyopia He queries whether the visual trouble could have been of hysteric origin, but adds that the duration, over a year, argues against this supposition

HE ANATOMIC CHANGES IN TWO CASES OF RETINAL DETACHMENT

ad in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY ROBERT L RANDOLPH, M D
BALTIMORE MD

I have selected these two cases as being fairly pical of the two principal conditions leading to tinal detachment first, a spontaneous detachment e to fibrillary degeneration of the vitreous body, d the second case was one where a small round cell coma had lead to propulsion of the retina away om the choroid

In case one the detached retina as it sprang from papilla appeared like a funnel having a neck about e-fifth of an inch long and which at this distance m the papilla commenced to assume the funnel-e shape The retina was detached below, all the y around to the ora serrata Above at a point one-teenth of an inch posterior to the ciliary muscle it s lying *in position From this point it turned* kward and then passed directly down to a point ich lay *in the pole of the lens, and from here took* ourse forward and then upward and finally lost lf in the ora serrata *That part of the funnel* ch had an upward direction was thrown into nerous and intricate folds and enclosed in its hes a mass of vitreous body while that part which sed below was composed of the entire thickness of retina which appeared quite normal The peculi-y of this portion was the absence of folds The er surface of the retina at the widest part of the nel was covered with a thick mass of vitreous body the angle which was formed by the ciliary body ront and by the retina behind, as it fell backward downward from the ora serrata, was filled with gulated material and fine fibrillæ, which latter ed forward and served to form numerous bridges ss this angle The ciliary processes were covered eriorly with several layers of the vitreous fibrillæ zonula was not distinguishable as such, it no ot being merged into the vitreous fibrillæ That ion of the vitreous lying between the retina and oid was empty No doubt we had a fluid here ng life At some points anteriorly could be seen are described by Nordenson as the choroidal , which appeared like little bridges uniting the a and choroid There was nothing worthy of about the choroid and the same could be said of iliary body, iris and lens There was a great tity of material in the interior chamber which probably transudate, coagulated by the hard-g process

croscopic Changes —The changes in the retina very noticeable and particularly in the anterior of the eye The anterior portion of the detached was the seat of the most marked degenerative ges the retina itself resembling closely a reticu-tissue in which there was hardly a trace of the al layers Posteriorly it was easy to recognize everal layers but they gradually disappeared d the ora serrata and the only evidence of a was a single row of granules which marked the e of the external granular layer The layer of nd cones was intact in several places but this tion was usually found in the posterior half of e At those points where the retina was thrown ery intricate folds this layer was more apt to be absent, but even in this situation it was sometimes present In those situations where the layer of rods and cones was absent its place was filled by a mass of albuminous drops, which were arranged in layers one on top of the other On the inner surface of the retina one could see the meshes of the vitreous fibrillæ, which appeared to be exercising traction upon the surrounding retina This layer of fibrillæ was tolerably rich in nuclei In one place the retina had curved around so as to form a loop, on one side of this loop all the layers were to be seen with the exception of the ganglion cell layer The layer of rods and cones could be plainly seen as well as the external limiting membrane On the opposite side of this loop the only layers which were present were the external granular and the external molecular, the latter to a very limited extent The inner layers in this situation had been pulled out of all shape by the vitreous fibrillæ The external granular layer presented generally a very irregular border line appearing at points as papilla-like projections, due I think to the folding of the retina The layer which occupied the usual position of the nerve fiber layer and which to a large extent was that layer, was the seat of numerous nuclei The radiating fibers of Müller showed generally a wavy course The line of demarcation between the ganglion cell layer and the nerve fiber layer was difficult to make out This was no doubt to be attributed to the traction exerted upon the nerve fiber layer by the fibrillæ and also by the very irregular course followed by the radiating fibers As a rule the ganglion cells had dropped out of the section and it was impossible to identify this layer An examination of the neck of the detachment, or as I have called it, the neck of the funnel, showed no remains of the vitreous body

This neck appeared to be a mass of connective tissue in which it was impossible to distinguish any of the retinal layers though it seemed to be made up largely of the granular At the papilla there was no semblance of the retinal structure There was too at this latter point a notable absence of blood vessels Upon the neck of the detachment on all sides there were resting several layers of albuminous drops The fibrillæ were for the most part devoid of nuclei They often appeared as though they came directly out of the retina and made their way into the vitreous body or as though they were prolongations of the radiating fibers, so intimate was their connection with the latter

Choroid —On the inner surface there were several layers of albuminous transudate resting on the pigmentary layer of the retina, which layer had remained behind as it usually does in such cases Increased nucleation was everywhere present throughout the choroid, and further than the points just mentioned, there was nothing noteworthy in this part of the eye The vitreous body was entirely wanting in the posterior part of the eye Just behind the lens it seemed to be transformed into granular debris devoid of fibrillæ, while in other portions it was composed apparently of the fibrillæ which have been described The lens, iris and ciliary muscle were normal

The chief points then about the pathologic anatomy of this case were 1 The widespread atrophic degeneration of the retinal layers and especially of the layer of rods and cones As a general thing the granular layers were the only ones which were preserved 2 Swelling of Müller s fibers 3 The prese of albuminous drops in various localities, especially between the choroid and retina and along the neck of the detachment, and finally the transformation of the vitreous body into the fibrillæ

The second case was that of a boy aged 7 years who came to the Johns Hopkins Hospital early this spring His parents had taken him to an oculist several months previously and at that time his eye was not thought to be in a serious condition He had been complaining for the last three weeks of severe pain in his right eye and his parents had noticed a whitish yellow reflex from this eye This was very noticeable when he came to the hospital The tension of the eye was decidedly elevated and the conjunctiva was injected Vision in this eye was completely gone I advised enucleation and the eye was removed the following day The macroscopic condition was as follows The tumor involved almost the entire nasal half of the retina, filling up that side of vitreous space both above and below It extended backward and seemed to proceed from the nasal side of the optic nerve and, advancing into the vitreous, stopped at a point about a quarter of an inch posterior to the lens Over the area occupied by the tumor there was no trace of the retina to be seen On its free side the growth was quite nodular and one of the nodules projected across to the temporal side of the eye and almost reached the retina on that side The retina in the temporal side of the eye was completely detached

Microscopic changes The tumor was scant in intercellular substance and was made up of small round cells Blood vessels were quite numerous and they were usually filled with red blood corpuscles Large areas of the growth failed to take on the hematoxolin stain but stained with eosin These were evidently necrotic areas Hemorrhages were frequently seen Wherever the tumor was present the retina was indistinguishable, the tumor having grown into it The tumor cells were found in the optic nerve as far back as a quarter of an inch from the papilla The vitreous body had been crowded over to the temporal side of the eye and transformed into the characteristic fibrillæ, which were exerting traction upon the retina and had pulled it into intricate folds in the anterior portion of the eye and just behind the lens the traction was enough to pull the retina backward to such an extent that there was only a short, narrow bridge separating the latter from the growth The layer of rods and cones was nowhere visible, and as in the first case, the ganglion cells had dropped out of the section The internal and external granular layers were clearly definable from the equator around to the ora serrata The retina posterior to the equator was very much thickened and broken down, failing to stain At one point only, and for a very short distance, the external limiting membrane could be seen The fibers of Muller were somewhat swollen and had a wavy course, which more or less disturbed the position of the retinal layers The choroid nearly everywhere had been attacked by the growth, large and small heaps of sarcoma cells were present in this coat and generally they were resting under the pigmentary layer of the retina, which latter was pushed up This condition extended around as far as the ciliary region on the nasal side and on the temporal side a short distance from the papilla There were no albuminous drops The principal changes in this case were the conversion of the vitreous body into fibrillæ and the atrophic degeneration of the retina in the anterior part of the eye

It would seem then that fibrillary degeneration of the vitreous body is to be found in both classes of cases In the case of spontaneous detachment it was evident that the fibrillæ were largely concerned in pulling away the retina from its normal position and from the arrangement of the retinal folds shrinkage or contraction from within must have been going on In this case there was a considerable exudate consisting of albuminous drops resting on the membrana limitans externa, which exudate no doubt played a part in separating the retina and choroid These two conditions would explain the detachment in the first case and similar ones In the second, the presence of the sarcoma was sufficient to lift the retina from its position, though even here it was clear that the retina was subject to a force from within which helped to pull it still further away from the choroid I failed to discover a rent in the retina in either case

In conclusion, then, the most striking anatomic change in these two cases was the fibrillary degeneration of the vitreous body, a condition which I think is found more or less in every case of retinal detachment, and which probably is the chief element in the pathogenesis of the disease

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ETIOLOGIC FACTORS, OTHER THAN MYOPIA, IN THE PRODUCTION OF RETINAL DETACHMENT

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY H O REIK, M D
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Of all cases of retinal detachment, between 40 and 50 per cent occur as the result of high degrees of myopia with the severe choroido-retinal changes that attend this refractive condition In most of these cases the separation occurs spontaneously, but even in those in which it is the direct or immediate result of traumatism the eye has been previously prepared for this accident by the weakening of its tissues In a study of the other 50 or 60 per cent we are compelled to attribute their origin to quite a variety of causes

The first of these to consider, because of its frequency, is trauma Whether the eye be myopic or hypermetropic, diseased or healthy, a wound and particularly one that penetrates the sclerotic and choroidal coats, may give rise to intraocular changes that result in disorganization and separation of the choroid and retina A myopic eye, or one that is the subject of choroidal or retinal disease, is predisposed to detachment, and in such cases often a very slight blow will produce very serious consequences Any severe blow, or injury about the head, may produce detachment, and Dr Maher has reported a case which he believes, and with apparently good reason, to have been caused by the use of forceps at birth

The next largest number of cases are the result of pathologic conditions of the choroid or retina produced by those diseases of the kidneys which may be grouped under the general title of albuminuria It is not uncommon to find associated with Bright's disease a retinitis or choroido-retinitis with more or less impairment of the vision, and in a small percentage of these cases detachment takes place The anatomic seat of the eye lesion in this disease is probably the blood vessels and as the supply vessels of the retina are end arteries any interference with their function is not compensated for as readily by collateral circulation as would be the case in other parts of the body So, almost always an extensive edema of the retina exists, which, owing to the loose attachment of that tissue, gives rise to the production of delicate folds in the membrane and later these may amount to a positive detachment, with its tendency to spread over the greater part of the fundus Occasionally, however, the detachment is brought about in a different way The vessel walls are sclerosed and weakened by the general disease, and any influence which tends to suddenly increase the blood pressure causes a rupture of the vessel wall with consequent hemorrhage, and the blood clot, if it be sub-retinal, produces a mechanical separation of the retina from its bed It would appear from the cases reported that detachment occurs most frequently in that class of kidney troubles in which we have to deal with what is known as the small granular kidney As very many of the reports, however, do not state the pathologic nature of the kidney lesion, it is difficult to arrive at any definite conclusions in this direction The above supposition, however, is what one would naturally be led to expect, as it is in association with the small atrophic kidney that retinitis albuminuria is most common Just as the retinal inflammation may occur in any form of nephritis, either acute or chronic, so may detachment be the ultimate result

The class of cases which probably offers us the most favorable prognosis is that occurring in the albuminuria of pregnancy, for here, if necessity arises the cause of the disturbance may be removed, and with that element withdrawn there is a remakable tendency to spontaneous recovery There seems to be no particular time in the course of pregnancy when we may anticipate retinal complications, as retinitis has been observed in every month, yet it is probably most liable to occur in the latter part of gestation, when the greatest tendency to general edema exists Schoeler reports cases of two sisters, both of whom suffered during pregnancy from detachment of the retina without any signs of albumin or retinitis

The following case of retinal detachment was related to me by Dr Randolph It is especially interesting as having occurred during labor The woman was the mother of eight children and always had easy labors Just before the birth of the ninth child her physician had made a thorough examination of her urine but had not discovered anything pathologic The labor was an exceedingly painful one and lasted for twenty-four hours At the height of one of her pains, and just after she had made a violent effort, she noticed that everything became blank before her right eye Since then she has been practically blind in that eye When seen by Dr Randolph there was nearly complete detachment of the retina in the right eye, the left eye being quite normal The case was seen a few days after the labor I think that the violent efforts and straining which she was constantly making led to a rupture of one or more of the retinal vessels which discharged their contents beneath the retina, thus forcing the latter away from the choroid, producing a detachment When we consider the frequency of subconjunctival ecchymoses following great efforts at stool or in children with the whooping cough, it is not strange that hemorrhage from the deeper vessels of the eye should have followed the violent efforts of a woman in labor

A few cases of detachment due to diabetic retinitis have been reported, but such cases are extremely rare, as diabetes is but seldom complicated by retinal disturbances

Galezowski found it, I think, in about 2 per cent of his cases, syphilis is given as the cause, and the same writer reports four cases the apparent result of sympathetic ophthalmia

Dr Mathew Owens of Brisbane, reported in 1884 two rather peculiar cases of double retinal detachment occurring in previously healthy eyes, as the result of sunstroke Both men were cattle rangers and the sunstroke was followed immediately by detachment The men were young and there was no history of any diseased condition that might have predisposed them to detachment In considering the cases Dr Owens offers the following as a possible explanation "It was shown by Boll that eyes which have been exposed to the influence of various colors are affected very differently as regards the pigment epithelium layer If eyes have been exposed to red or yellow, or kept in darkness, the pigment layer is quite easily separated from the retina, but not so if exposed to white, green or blue The retina and pigment are so closely united that they can not be separated The eyes of both patients had been exposed for some hours to the sun's glare, retinal hyperemia was present, sunstroke came on, the sinuses of the brain being engorged there was an impediment to the return of the blood to the brain from the congested fundus, effusion of serum took place, and the retina was quite ready to be detached because its pigment layer had been exposed to the yellow glare of the dried up ground" It is a rather unique explanation, and one which in my opinion is somewhat forced

Erysipelas of the face and neuralgia of the fifth nerve in a small number of cases, have appeared to be the cause of retinal detachment

Separation may be produced mechanically by hemorrhage or by sero-purulent exudates such as occur in purulent choroiditis or in phlegmon of the orbit Tumors in the choroid or retina, or a cysticercus developing beneath the retina may also be causative factors The tumors are usually glioma, or choroidal sarcoma

In every case of detachment the cause should be determined, if possible, because of its important bearing on the treatment Rydel has given statistics to show that 5 per cent of all our blind have become so from retinal detachment Despite the greatest care taken, however, in examining these cases, there still remain a large percentage in which no cause for the lesion can be ascertained In these cases the patient usually gives the history of having been perfectly healthy, with an eye that was either emmetropic or hypermetropic, and no exposure to injury of any kind The first symptom is a slight cloudiness of the vision, or a limitation of some portion of the visual field It is not attended by pain and it is only the loss of vision, more or less complete, that causes the patient to consult an oculist Some have thought that disturbances of the sexual nervous organization might be an explanation of a few cases, and in that connection quote Hutchinson as saying that "sexual abuse may produce degeneration of the vitreous," but I can find no case recorded where there is any conclusive evidence of this having been the cause Sudden suppression of the menses may result in hemorrhage, and that in detachment

The pathology of this affection has not been satisfactorily explained It was formerly held that the retina was pushed forward by a transudation from the choroid This hypothesis now has few adherents

A second theory, now generally known as the Leber-Nordenson, and which is the one most generally accepted, attributes the attachment to traction from the vitreous side The active cause here is held to be a shrinking of the vitreous, which ruptures the retina and permits the fluid from the vitreous cavity, pressed out by the contracting tissues, to pass through the rent into the subretinal space

This hypothesis assumes not only a shrinking of the vitreous, but an adhesion between the vitreous and retina and a rupture of the retina previous to its detachment

That rupture of this membrane necessarily precedes its detachment I do not believe I can not see the need of this supposition in regard to a tissue so loosely attached to its bed as is the retina, and, furthermore, if it does always occur we should be able to see it in a greater number of cases In a very large percentage seen, even in early stages, it is impossible to find a rupture and even Leber, who considers it so important to his theory, found it positively, in relatively fresh cases, in only about 50 per cent

It may be that in some cases, at least, the change in the vitreous humor is a chemic one, which leads to an interchange of fluids between that body and the blood vessels of the choroid, and that detachment is produced in accordance with the diffusion theory This theory, so ably advanced by Raehlmann, has not received the consideration it would seem to merit

Though the immediate cause of displacement is so obscure it is probably safe to say that the vitreous is always the seat of pathologic alteration, though such changes may not be, and often are not, apparent by ophthalmoscopic examination One can hardly conceive, except in case of intra-ocular growth, or of sub retinal hemorrhage, of detachment occurring when the vitreous is of normal consistency and exerting its usual pressure on the surrounding parts

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TREATMENT OF DETACHMENT OF THE RETINA

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga , May 5 8 1896

BY CASEY A WOOD, M D

CHICAGO ILL

Without taking your time with a historical sketch of the various remedies employed in the treatment of detachment of the retina I may say that the earliest efforts of the ophthalmic surgeon were directed to puncturing the subretinal sac as it was found that this usually brought the displaced membrane into its normal position As, however, the detachment was found to occur a second or a third time or, indeed in many cases, as often as it was replaced, various expedients were resorted to with the hope of rendering the cure permanent

Before speaking of these matters in detail let me remind you that replacement of the membrane does not necessarily mean a restoration of the lost visual function, although it is a *sine qua non* of that restoration Nor do the visual acuity and the extent of the visual field form a proper measure of the success of a remedy for detached retina *as such* A badly damaged retina (as in the long standing cases) perfectly replaced may give results much less satisfactory to the patient than an imperfect replacement of an other wise healthy membrane—such as we commonly find in recent examples of this disease

I pass over the treatment by rest in bed, with or without such adjuncts as bandages, the local use of eserin and atropin, the internal administration of salicylates, purgatives, diaphoretics, potassic iodid, pilocarpin injections, starvation, iridectomy, sclerotomy and puncture of the sclera, to take up certain other surgical proceedings that are now claiming attention as being more or less novel

I had been attached for nearly a year to Professor Schöler's Klinic in Berlin when he first began to experiment with intra-vitreous injections of iodin in this disease Consequently, I have had excellent opportunities of observing its effects Although much was hoped and expected from the procedure and a number of cures have certainly resulted from its use, the evidence is on the whole against it as a dangerous and by no means certain remedy That numerous eyes have been entirely lost from the employment of Schöler's method, I am obliged to confess, and I do not think that, even in its modified form, one would be justified in employing it Most of you will also recollect Gelpke's experience The patient, a healthy man, 66 years of age, with detached retina, received under strict precautions a vitreous injection of three drops of iodin mixture *In two days he had a purulent choroiditis* and in six days he died of acute meningitis

Other less active and more certain expedients may be employed to produce all the effects which Scholer claims for the iodin injections We may dismiss, also, as needless and dangerous, the injection of irritating fluids—such as potassic permanganate, suggested, I think, by Darier—through a puncture in the sclera To this category, too, belong De Wecker's device of a gold suture and Galezowski's catgut suture, all three intended to produce local inflammatory areas and so bind choroid and retina together

Wolfe of Glasgow, made a long incision (6–10 mm) through the sclera, the underlying conjunctiva being pulled away by hooks, and so obtained free and con tinued drainage of the subretinal fluid In fifteen eyes he had improved vision (lasting five months to a year) from ½ to 1-50, in five cases the results were *nil*, and in two instances the eyes were lost Even when performed under strict aseptic precautions the danger of infection through these large wounds must be considerable

Gillet de Grandmont first advised electrolysis of the subretinal fluid Simi of Florence, among others has successfully tried this method in a case of recent detachment, using a 5 milliampère current for sixty seconds, and two weeks subsequently the same current for seventy seconds There were signs of reaction in both iris and vitreous and the exudation disappeared, but the detached portion remained opaque and was clearly outlined from the healthy retina by a pigmented line

Terson of Toulouse, from a study of twelve cases in which he employed electrolysis of the post-retinal fluid, believes that the method of Gillet de Grandmont with a single needle attached to the positive pole is superior to those of Abadie and Scholer, the latter of whom employed the bipolar plan—making two punctures in the globe

Posterior Ophthalmotomy—Galezowski[1] formerly relied on iodin injected into the post retinal pocket (1886) with aspiration of the contained fluid If necessary he followed this with a catgut suture, passed like De Wecker's earlier gold stitch, through all the eye coats This latter procedure usually succeeded in binding the retina to the choroid but as it was followed in two instances by severe intraocular inflammation he abandoned it in favor of the operation which he now recommends as free from danger and quite as successful He calls it posterior ophthalmotomy The instrument used is in the form of an arc of a circle, like a curved needle, so that a sufficiently large puncture and counterpuncture can be made and a sufficient number of retino choroidal cicatricial points produced to keep the detached membrane in place when it has once returned He has already followed this plan some seven times—in five cases with partial, in two with great success In one instance of a man aged 50, with a double detachment, of long standing on the left side, but recent on the right, he obtained a complete cure in six weeks The linear cicatrices could be made out with the mirror, the visual field and central acuity were very greatly increased

Probably the most recent, original and important contribution to the rational treatment of retinal detachment has been made by Deutschmann of Hamburg, which first appeared in his *Beitrage zur Augenheilkunde*, although he has since (in May, 1895) given an abstract of the brochure in the *Deutsche med Wochenschrift* He prefixes the account of his methods by a reference to Erik Nordenson's work with Leber

Apart from certain rare forms of the disease, detachment is due not so much to a primary deposit of water from the choroid behind the retina as to the dragging upon this coat by a diseased and shrinking vitreous The detachment is merely one of the signs of the vitreous disease Nordenson shows that without losing its transparency the vitreous develops a fibrillar quality, decreases in volume and in shrinking allows the vacant space to be filled with serous liquid This change in the consistence of the vitreous body is not unfrequently accompanied by proliferation of the vitreous elements as well as by a chronic inflammation of the choroid Portions of the thickened vitreous remaining firmly attached to the retina are, with it, liable to be dragged toward the center of the posterior chamber Deutschmann's first proceeding, which he names *Netzhautglaskorperdurchschneidung*, is intended to sever all connections between the shrinking vitreous and the retina, to allow of a free communication between the posterior chamber and the serous collection behind the retina, to empty the latter space so that the freed retina may return to its normal position, and lastly, to produce adhesion between choroid and retina at certain points, these indications are met by the following operation The previously atropinized eye is cocainized and a double edged knife, of the Graefe pattern, is introduced at the chosen spot, the conjunctiva being pushed to one side It pierces all the ocular coats, sclera, choroid, and the detached retina Thence the knife is passed obliquely through the vitreous mass until it touches the opposite wall of the bulb It is now carefully moved to and fro toward either side making a vitreous discission and is finally removed, and a light occlusive and antiseptic bandage applied Slight hemorrhage occurs at the point of entrance of the knife and inflammatory action is set up about the incision points in both choroid and retina This latter process is relied upon to permanently fix the retina to the choroid and so resist any subsequent pulling of the vitreous

The patient is now kept in bed for eight to fourteen days, until the ophthalmoscope shows that the case is cured The atropia is continued for several weeks longer When the retina does not lie perfectly flat on the day after the operation, a delay of a few days may be made in the hope of its complete return to the normal position If this fails the same procedure is to be resorted to, as often as is required, until the desired effect is obtained Deutschmann has operated ten times upon the same patient with good results at last He thinks that repeated thrusts of the knife are safer than, and as effective in inducing a sufficient degree of adhesive inflammation between the retina and choroid as the application of the Paquelin or electro-cautery point to the sclera, or, piercing that also, to the choroid and displaced retina beneath

He refers in his short article in the *Deutsch med Woch*, to eleven patients treated by him, to date Upon four the Paquelin cautery was employed and the sclera pierced Of these four, two were partially relieved and two not benefited Of the remaining seven, where the cautery was omitted, total replacement of the retina was obtained in six instances, with decided improvement in vision This satisfactory condition has persisted in one case for four years, three cases two years, one case one year and one five months In the case, where least benefit accrued, only one operation was made, the patient declining further interference

The author advises this operation in those more favorable cases, where the displacement is recent and not too widespread and where disease of the coats is not advanced

In another class—in their nature more hopeless—he has employed quite a different and novel remedial process, which he styles "*Kaninchenglaskörpertransplantation*" This was first tried on a patient 28 years of age, with bilateral detachment of the retina The left eye had suffered a sudden and total separation of the retina from the choroid The eye was soft and vision was reduced to perception of light in the upper part of the field Both anterior and posterior retinal spaces were filled with a sero-sanguineous fluid Deutschmann removed this bloody serum and with an ordinary hypodermic syringe injected into the empty vitreous cavity the freshly prepared, aseptic vitreous of a young rabbit, diluted with a $\frac{3}{4}$ per cent solution of common salt The addition of the sterilized salt solution was intended to allow of easy flow of the vitreous as well as to act as an irritant and bind the choroid to the retina The result was marvelous The operation was performed Feb 4, 1894 On April 28, V = $\frac{15}{200}$, on July it was $\frac{15}{70}$ and Jäger No 3 F of V for white was uncontracted and has so continued

Deutschmann has, to May, 1895, performed this operation on six patients and seven eyes, and in four obtained results that hitherto would have been regarded as impossible In all, central vision before the operation was reduced to perception of light or shadows and most of them were cases of total detachment

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[1] Galezowski Mem et Bull de la Soc frs 1895 p 170

In case 2, which was of many years standing, there was beginning secondary cataract, V= eccentric finger-counting at four feet Result Useful central vision, replacement of the detached retina and enlargement of the eccentric field to twice its previous size Case 3, total detachment from injury V= hand movements Visual result not very encouraging V=finger counting at 2 and 3 feet eccentrically

In the other cases the result was uniformly favorable The patients have been under observation for from a year in Case 1 to five months in Case 6 after the replacement of the retina This operation may have to be repeated two or even three times and it must be remembered that an inflammatory reaction follows each injection

Detachment of the retina does not occur often in this country, but I have on my records six cases that consented to be treated for a sufficient length of time to make my experience with them worth mentioning The treatment for two scleral punctures, one iridectomy and the other three had prescribed for them continued rest in bed with pilocarpin injection Only in one case, treated by puncture and pilocarpin, was there a permanent cure, the retina being replaced, the visual field expanded, and the central vision now equals finger counting at seven feet, although at one time it was reduced to perception of light This continued for nearly a year, when I lost sight of the patient My experience of this disease in my own practice, public and private, and in that of others lead me to think, with Bull of New York, that we have as yet discovered no better device than that resorted to with occasional success by the older ophthalmologists, viz rest in bed, bandages, atropin and the internal use of some absorbent Instead of the long continued use of pilocarpin, especially when that drug is ill borne by the patient, we may substitute soda bicarbonate and potassic iodid, well diluted with water In all recent cases where the eye is quiet and there is no vitreous strand to sever, conjunctival puncture of the sclera may do temporary good and vision may be improved Division of fixed membranous bands in the vitreous may be done without causing much reaction and may prevent extension of the disease He does not approve of Schöler's method

In conclusion, this review of the treatment of detached retina would be incomplete without a reference to spontaneous cures Many such cases are recorded, indeed one may safely say that of all the histories of cures, temporary and permanent, at least 10 per cent were accomplished without treatment So numerous and well authenticated are they that I think that a large percentage of the results obtained after iridectomy, after removal of the lens, from the use of atropin, bandaging, pilocarpin, etc , even some cases of cure following posterior operation, are really brought about by local and general rest—by putting patients in such a position that they can not by over exertion of any kind make a bad matter worse The retina, having meantime broken loose from its connections with the shrinking vitreous, returns to its natural position—and the treatment, medical or surgical, receives the credit

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This is the *proper season* to increase the membership in the Association Let everyone secure *one!*

REPORT OF A CASE OF RETINAL DETACHMENT AND EDEMA OCCURRING IN CHRONIC BRIGHT'S DISEASE

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY LOUIS F LOVE, M D
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When we take into consideration the blood conditions existing in albuminuria, it seems strange that the occurrence of retinal edemas and detachments are not more frequently found The vitreous body is undoubtedly nourished from its surroundings, and Raehlman long ago demonstrated that by injecting strong salin solutions into the vitreous he was able to produce retinal detachment and that the fluid secreted was densely albuminous, so that it seems rational to say that any cause which produces profound changes in the circulation would interfere with the balance of osmosis between the vitreous body and the choroidal vessels I believe that by a careful chemic and microscopic examination of the general blood conditions, especially the liquor sanguinis, we might be able to benefit, at least, some of our patients to whom we are at present useless In detachments taking place in high myopias or resulting from inflammatory conditions, this line of investigation would be of no avail, but in those cases arising without apparent cause, such as we occasionally see in emmetropic eyes, that such a research might be of use This case is reported for the reason that it is not only rare, but because of the unusual prolongation of life

C D, a short, stout woman, aged 54 years, applied for treatment Oct 26, 1892, giving the following history Had always enjoyed good health Lately slight headaches and dyspnea upon exertion She is the mother of five children three living, no miscarriages, menopause at 46 Four years ago her vision in her right eye failed suddenly About two weeks ago she noticed a dimness in the left eye The present eye conditions were as follows O D V = counting the fingers at ten inches O S V = $\frac{20}{70}$ + S 2D = $\frac{20}{30}$ + S 4D type 1D 12c to 25c The eyes are rather deeply set, ocular and tarsal conjunctiva pale, the arcus senilis well marked above, the color of the irides brown, right pupil 3 mm and very sluggish to light, left pupil about $2\frac{1}{2}$ mm , active to light Anterior chambers shallow, strong reflexes from both lenses Right eye Tn — left Tn

Ophthalmoscopic examination O D A few very fine floating vitreous opacities, the nerve decidedly atrophic, the vessels diminished in size and a retinal edema extending well out when an extensive retinal detachment was plainly seen superiorly and inferiorly, giving the characteristic delicate gray undulating tremulous protruding membrane The vessels could be traced from the papilla out into the detachment, and in places showing sharp bends and partially hidden from view by the folds of the separate surface The disc is seen best with + 3D , the detachment with about + 7D Left eye lens seemingly hazy, disc very red gray, veins slightly enlarged, arteries normal in caliber, carrying poor blood, a large area of hemorrhagic extravasation in the macula region and a few white plaques found just above the disc H = 4d

Examination of the urine was as follows Straw color, acid, specific gravity 1018, albumin in moderate amount, no sugar, microscopic examination hyalin casts, pus cells and few blood corpuscles

The patient was under the care of Dr J C Wilson, who saw her on four or five occasions, between Nov 1, 1892, and March of the following year His *report to me was as follows* There was cardiac hypertrophy, accentuation of the aortic second sound and slight pre-tibial edema She *improved in* respect to the headaches and restlessness while under treatment by strychnin and nitroglycerin, together with a carefully regulated dietary

The woman was not seen again until Nov 6, 1895, three years after the first examination O D V = light perception only O S V $= \frac{20}{70}$ + S 2D V $= \frac{20}{30}$ Ophthalmoscopic examination shows vessels thread-like in the right eye, apparently similar conditions of retina as existed when first seen The left eye, the nerve quite gray, vessels about normal in size, in the macula region a brownish black area, and above the disc there are characteristic changes of an old retinitis Brightii The patient states that her general condition is about the same, enjoying fairly good health, she has taken no treatment since March, 1893, but adheres somewhat to the regulated dietary as ordered by Dr Wilson

1762 Frankford Avenue

DISCUSSION ON PAPERS OF DRS RANDOLPH, REIK, WOOD, AND LOVE.

Dr J A White, Richmond—In considering the etiologic *factors of detachment we are to some extent groping in the* dark Apart from myopia, tumors, subretinal hemorrhages and effusions, I do not think we have any very sure foundations for explaining the many cases we meet with where there is no apparent cause whatever It is important to know the cause in order to decide upon the method of treatment, but in many cases this can not be established When we come to consider the treatment we are still as badly off as we were many years ago The old treatment of rest, diaphoretics, pilocarpin, etc , give us as good results to day as any of the operative procedures It is only in the recent cases of detachment *that we have had any satisfactory results from any of the* methods I have tried rest, iridectomy, sclerotomy, paracentesis and sclero puncture I do not advise operative measures except in recent cases where the macula is involved, and even then I do not if there exists a condition *likely to lead to* hemorrhage Electrolysis may be a good thing, certainly much has been claimed for it The galvano cautery is too dangerous, and should be placed in the same category as the injections of iodin Deutschmann's method has been mentioned, but neither he nor anyone else has had sufficient experience with it to warrant very favorable reports One method that has *not* been mentioned here is that of Strau He frees the conjunctiva from the sclera over the site of the detachment, makes three little slits in the sclera, and then unites the conjunctiva over this with sutures and allows it to heal He then makes *injections in this* region of a 1 5000 bichlorid solution, and has claimed very good results It is simply an experiment, like all the others, and may be discarded I have not tried the injections of rabbit's vitreous according to Deutschman I have watched a few cases in private practice *from their start* One was in a physician and associated with myopia He has a low grade of *myopia* and wears a —2 50 D for distance, and with it has had for fifteen years almost perfect vision Recently he said that he had a little spot in his eye, I paid no attention to it, thinking it simply a musca volitans Some time later he complained of an increase of this spot, but I could not find any opacity with the ophthalmoscope Later a slight spot became visible, looking like a floating string, and I then told him that his vitreous was undergoing liquefaction, though he never had any alteration of the refraction or any changes in the choroid that I could determine Soon I noticed a secondary detachment, and although we gave treatment by rest, pilocarpin, etc , at once, in sixty days the detachment was absolutely total He from the first refused an operation, because he was well acquainted with the subject, and knew the slight chances of success

Dr Lyman Ware, Chicago—I did not for a moment question the correctness of the report of Dr Terson's cases, but I was not convinced that electrolysis was the cause of the result Is the using of a positive pole a rational treatment? One of the first things settled in regard to the use of electricity was that the *positive pole produced coagulation* and the negative pole diffusion *Would not absorption be best brought about* by the use of the negative pole? The fact that we have such a variety of treatments offered shows that none are very satisfactory

Dr A R Baker, Cleveland—I wish it were possible to make a more scientific classification of these cases In the case of hemorrhage, tumor or trauma the detachment is simply an incident, and in those cases produced by Bright's disease, if the cause could be removed the case would recover Formerly *I made a sclero puncture, but lately I have omitted that* Besides rest I give them diaphoretics, and in some cases we have found considerable benefit One case where there was almost complete detachment in one eye existing for a number of years was followed by detachment in the other eye I kept him under treatment for six months, and discharged him with fairly good vision About three years later I found him back in the hospital, *blind* and without *any prospects of recovery* Treatment is very unsatisfactory

Dr G E De Schweinitz, Philadelphia—I would deprecate the report of cases of retinal detachment submitted to operative interference, before sufficient time has elapsed to test the *sufficiency of their cure* I would suggest that Deutschmann's result in human beings with injections of sterilized vitreous be repeated in animals

Dr D S Reynolds, Louisville—I am unprepared to accept the details of the pathologic changes described by Dr Randolph *It is by* no means clear that the drawings furnished are sufficiently accurate to support the accompanying descriptive language The normal retina can not be shown to contain pigmented layers, yet Dr Randolph's report contains a reference to that impossible condition In my own experience *results have been in some cases very encouraging at first*, but in a few months fatal relapses have occurred In persons under fifty years of age, in good robust general health, medicinal treatment often yields brilliant results, but in nearly all cases subsequent return of the detachment of wider areas surely comes on in due course of time I have seen it most always in myopes, but never in any but progressive cases My attempts at operative treatment have yielded results in no wise more encouraging than that by the salicylates, pilocarpin and the iodids, *with rest in bed* Much *remains yet to be done* before we may claim any permanent recoveries from any treatment

Dr R L Randolph—While nothing positive has been added to the therapeutics of this subject, I think we have gone over the whole field thoroughly, and it is always a help to know the present status of any subject

Dr A R Baker, Cleveland—The question has often been suggested to my mind whether we have detachment in this class of cases I have seen but few *except* in high degrees of myopia, and become so accustomed to think of it in this way that I have almost quit looking for any other cause

Dr F W Higgins, Cortland, N Y —In looking up the subject of edema of the retina in Bright's disease, I noticed one cure reported by Brecht (*Archives f Oph* , Vol xviii, 2 p 102) of marked detachment of the retina *in nephritis* He considers it very rare and due to some p [illegible] tion

THE USE OF CAUSTICS FOR EPITHELIOMA OF THE LIDS

Read in the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY FRANK TRESTER SMITH, A. M., M. D.
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This subject was suggested by the following case which came under my observation.

Frank S., age 64, of Chattanooga, at the age of 43 had had the right eye destroyed by an explosion. The ball was shrunken and the lids adherent, so that this eye was entirely useless.

The left upper lid presented an ulcer about one-third inch in diameter covered with a dry scab, on the inner and outer sides there appeared to be a blister. The trouble began twelve years ago from a small scab which was picked off from time to time and the ulcerated surface had gradually grown larger. A few days before, some empiric had made an application which had caused the ulcer to double in size, after which the borders had become blistered. A soothing application was prescribed with the idea that the blisters would disappear, but the bases became hard and the contents gelatinous. The case did not improve after several weeks' treatment. The diagnosis of epithelioma was made, and an operation, consisting of the total removal of the inner half of the lid and supplying its place by a plastic operation, advised. The patient was myopic and presbyopic. Left vision 20-200 with 2 dioptry concave lens 20-70. While preparing for the operation the patient came under the care of an empiric who by means of some caustic, apparently destroyed the pathologic growth, and it was replaced with a smooth cicatricial tissue, leaving the lid intact and much more useful and ornamental than any plastic surgery could have devised.

The case suggests that in some cases of epithelioma of the lids, especially where we can not operate, that caustics should be used. In this case the pathologic tissue extended so as to require the removal of the entire thickness of the lid by any cutting operation, and any surgeon would certainly have removed at least half the lid and even then there would probably have been a reappearance of the tumor. Nearly all this was removed and the lid left in good shape, with the loss of a small amount of tissue, by the use of caustic in unskilled hands. It can but suggest that if the caustic had been carefully and thoroughly applied the cancer cells would have been thoroughly destroyed.

Dr. A. R. Robinson, of New York, called attention to the advantages of the use of caustics in the treatment of cutaneous epitheliomata in an instructive paper read before the Tri-State Medical Society of Alabama, Georgia and Tennessee in 1895. For use about the eye he recommended a solution of chlorid of zinc in a 20 per cent. solution of cocain.

The objection to the use of caustics, in this location, is that some of it may come in contact with the eyeball and cause ulceration. For this reason these growths are removed by cutting.

The advantages of the caustic over the knife are that there is usually less destruction of tissue, and with the destruction of the same amount, the result is surer, because the necrosed tissue is surrounded with an inflammatory zone and the products of the inflammation tend to destroy the pathologic cells for a distance beyond the part extirpated. This is more likely to be the case if the wound is allowed to suppurate, as it is generally conceded that the toxin of germs which produce suppuration are destructive to the cells of epitheliomata.

Some of the caustics have an elective action on the cancer cells. This is notably the case with arsenious acid, which should be used weaker than in Marsden's paste, three parts of acid to two of gum acacia. It is said this will not attack normal tissue for twenty hours. It is believed that by having the case under constant observation during the application, that caustics can be used safely on the lids, in many cases, to the advantage of the patient. I am aware that this position is opposed to that of most oculists but I have been told that some of the members of this Section have used caustics instead of the knife. However, I have been unable to find any literature on the subject.

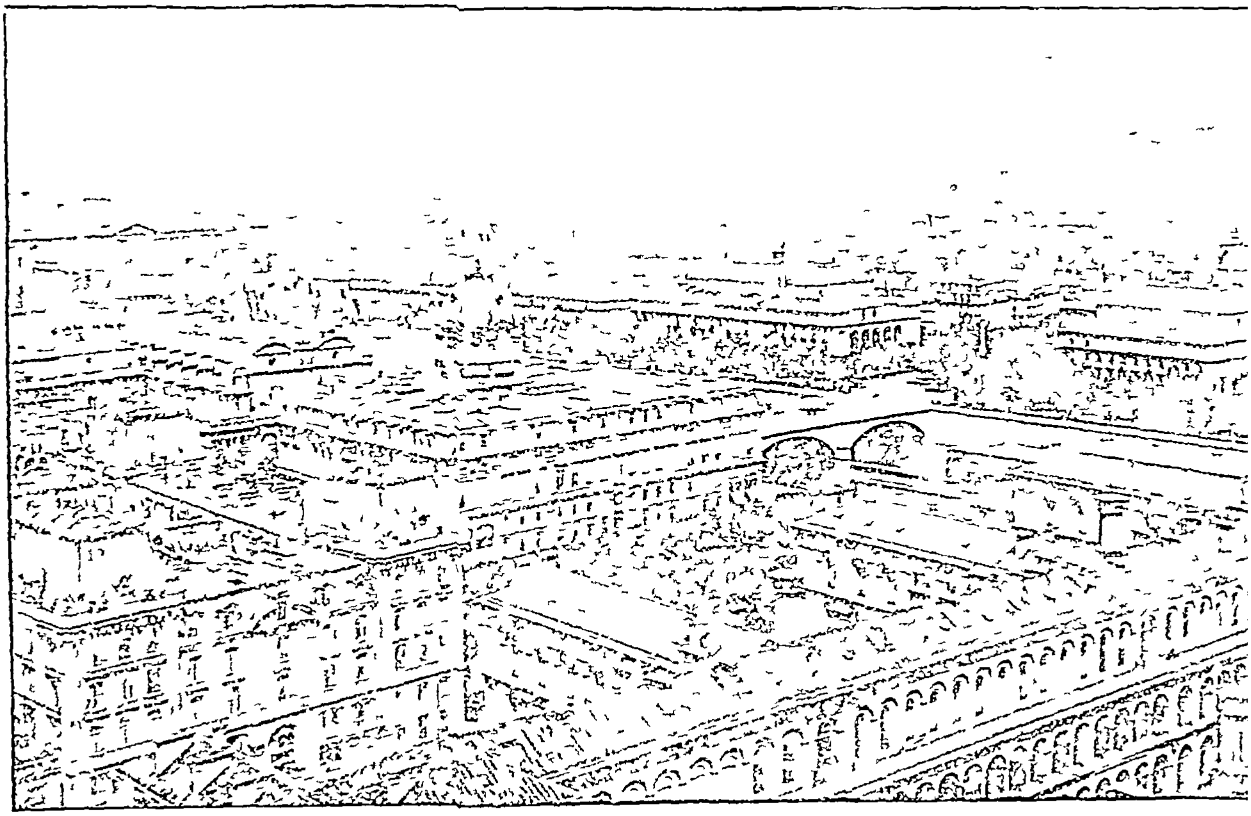
MEDICAL PARIS

NOTES FROM MY SKETCH-BOOK

BY L. HARRISON METTLER, A. M., M. D.
CHICAGO, ILL.

In his powerful romance, "Les Mystères de Paris," Eugene Sue, who, by the way, was a physician and the son of a physician, paints a vivid picture of Parisian low life, locating most of his scenes in the crowded tenements and narrow alleys which once occupied the ground now covered by the immense buildings of the Hotel Dieu. When these buildings were constructed, only a few years ago, the remains of the historic Hotel Dieu, as well as many another ancient landmark, were swept out of existence. The Ile de la Cité, with the noble old cathedral of Notre Dame, the gruesome Morgue, so strangely fascinating to Dickens, the Hotel Dieu, so often pictured in history, poetry and romance, the Palais de Justice, the oldest monument in the city, and the matchless Sainte Chapelle, the gem of medieval architecture, constitutes only a small section of modern Paris, but it is the richest in historic lore and romantic anecdote. In one of the ancient streets, now vanished on account of the encroachments of the Hotel Dieu, dwelt the shrewd physician, Theophraste Renaudot, who, in 1630, printed the first Parisian newspaper, *La Gazette de France*. The wily Theophraste had observed something of the power of human curiosity and had cunningly undertaken to gather news from all quarters for the amusement of his patients. Of course his clientage rapidly increased and in a short time he was more in fashion than any of his practicing brethren. But all Paris could not be expected to be on the doctor's sick list at the same time, and were even such a pleasant thing possible his suite of apartments would not be able to accommodate such a glorious rush of practice. Accordingly the doctor decided to publish weekly some fly sheets, containing the latest news from other countries. For this he needed a license and obtained it *cum privilegio* in 1632. The success of the venture surpassed the most golden dreams of even the medical imagination. Similar fly sheets had already been issued in Venice, for which a small coin, *una gazzetta*, was asked, whence comes the name of our modern gazettes.

One day as I was coming out of the Hotel Dieu, a student, with whom I happened to get into conversa-



PARIS, LOOKING NORTHWEST FROM THE TOWERS OF NOTRE DAME CATHEDRAL HOTEL DIEU IN THE FOREGROUND

tion and to whom I had just mentioned several special clinics which I had learned were to be given, asked me where I obtained my information in regard to all these things Of course I told him and then wondered if old King Clovis did not turn over in his grave to think that a Chicagoan must needs inform a descendant of the proud Franks in regard to his cherished Maison Dieu The Hotel Dieu Hospital, or God's Hostelry, known in early history as the Maison Dieu, is said to be the most ancient hospital in Europe The actual date of its foundation appears to be in doubt though there are reasons for thinking that it had its origin under Clovis, King of the Franks, who flourished during the latter half of the fifth century Saint Landry, who was Bishop of Paris about the middle of the seventh century, is the reputed founder It is probably this hospital that is men*tioned under the name of St Christophe in a charter* of 829 The Maison Dieu was not the direct offshoot of a monastery, as many other hospitals were In accordance with the decree of Charlemagne, promulgated in 816, that at each See one of the canons should govern the hospital, and that the latter should always be near the cathedral, the Maison Dieu was erected within the shadow of the Notre Dame cathedral and was, until quite recent times, under the control of its chapter At first it was more than a mere harborage for the sick It was a charitable organization, embracing every form of aid to the poor and outcast The first building to bear the name of Hotel Dieu, on the south side of the Place du Parvis Notre Dame was commenced by Philippe Auguste who named its first ward the Salle St Denis Queen Blanche of Castille added the Salle St Thomas It was then almost entirely rebuilt by St Louis who added especially the Salle Jaune and two associated chapels on the river bank For nearly a hu years after this it was wofully neglected, but Louis XI ascended the throne its prosperity re This king did much to favor it, and built the e itely beautiful gothic portals of the two chapel the Petit Pont, which, together with the el renaissance gable belonging to the Salle du were the particular artistic features of the bu until its destruction by fire in December 1772, many of the sick inmates perished and the rest hastily received by the archbishop in Notre Henry IV added two wings and greatly increase revenue of the hospital Were it not for the fri loss of life and the burning of the charming ch the destruction of the old hospital was a blessing than otherwise It was small, badly arranged anything but architecturally beautiful Victor *describes its front as "furrowed and rugged"* says its roof from the tower of the cathedral lo as though it were "covered with pimples and wart

The next building that was erected to take place of the old Hotel Dieu was devoid of all sp *features in the way of art and architecture* little effect it did produce upon the artistic eye completely lost by its juxtaposition to the cathedral It consisted of several irregular mas buildings and its portal, erected in 1801 after des made by Clavereau, was severely plain and Dor style Beneath its peristyle stood the statue of philanthropist Montyon, who was buried (1838) according to his desire in the midst of the poor sick *It was in this building also that the fin* poet Gilbert died in 1780 In the reign of Louis the over-crowded condition of the hospital was a grace to the city of Paris and to the science of m cine The monarch attempted some relief by erec four auxiliary establishments in the suburbs, namely, the St Louis Hospital, the St Anne Hospital, the Hospital for Incurables and the Hospital for Convalescents. A horrible picture of the wards at this time was given by Tenon, the president of a committee of investigation appointed by the Academy of Sciences. Convalescents were seen by the local commissioners in the same room with the sick, the dying and the dead. The insane were confined in neighboring rooms and apartments and kept the other wards in a continual state of excitement with their ravings. Operations were performed in the same room or ward in which there were beds containing other patients. In the days before the use of anesthetics we can well imagine that the cries and contortions of those undergoing operations would have anything but a favorable effect upon the other patients. During the French Revolution the name of the hospital was changed to L'Humanité. Finally the whole conglomeration of inadequate and unsightly buildings was demolished, an increased area was secured and the present vast, homogeneous and elegant edifice was inaugurated in August, 1877, under the direction of the architect Diet. It is an immense oblong stone building surrounding a courtyard of ample dimensions. The arrangement of the wings, gridiron-like, is the happiest imaginable for the introduction of air and sunlight into the interiors. Overlooking the courtyard is a peristyle or open porch all round the building where convalescents may sit in the open air. The work of the hospital comprises a service of about 810 beds. Of these 430 are for men and 380 for women. Medical cases take up 555 beds while 255 are given over to surgical cases. The history of the government of the hospital is interesting. Until 1505 it was under the management of the chapter of Notre Dame. After that year it was looked after by a committee of lay governors, eight in number, selected from the citizens of Paris. The selection was made by the mayor and aldermen and the appointments confirmed by the parliament. In 1654 the number of directors was raised to twelve. In 1690 Louis XIV made some alterations in the government and formed the Grand Committee, including in that committee the archbishop of Paris, the former presidents of parliament, of the taxation court, of the court of alms, the commissioner of police and the mayor. To-day it is under the control of the Assistance Publique, one of the departments of the Prefecture of the Seine, as I explained in my last sketch. The oldest paper in its rich collection of archives is dated 1157, and from 1531 to the present there is a complete unbroken history of its work. Such is the story in brief of God's Hostelry, Paris, the oldest hospital in Europe, and one of the greatest in the world. Within its walls medicine has had one of its firmest strongholds and from its wards have issued many discoveries in science. Did I say the poet Gilbert died here? Many another poet has died here too, yea, and statesman and artist and soldier and king, whose names have never been emblazoned on the escutcheon of fame. Sickness is a great leveler of the human race, births and deaths emphasize the equality of man. A hospital is a place for thought, a great hospital awakens reflections that only eternity can answer.

As a frequent visitor to the Hotel Dieu I was intensely interested in some of the differences between French and American hospital methods. One day I accompanied a group of students, who were being instructed by the surgeon Kermisson, a spare, active, wiry sort of a man, who always wore a skull cap, through the wards. The operator hastened from one bed to another, examining this patient, performing a slight operation upon that one, prescribing for another, while the class arranged themselves as best they could about the foot of the bed, to see and hear what was being done. This walking through the wards has clearly its advantages for the student but disadvantages for the patient. The latter is excited and made nervous and it seemed to me was unnecessarily exposed to the contamination and germs of disease brought in by the students from the street. When an operation was to be performed a screen was placed by the attendants around a table at one end of the ward and the patient carried from the bed to the table. The patient, especially if it were a child, would scream and kick and thus disturb the entire ward. The morning visits of the staff were therefore always a time of excitement and turmoil, and in many respects the manner of them seemed to me to be unfortunate and primitive in the light of the scientific knowledge of the present day. Among the group of students, men and women, about twelve or fifteen in all, elbowed one another for a closer view or rattled their tongues in chatter like flying shuttlecocks. Modesty appeared to be an unknown quantity in such a group, science and knowledge alone were the guiding spirits. The exposure of the patients was at first something quite shocking to an American's sense of delicacy.

Upon another occasion at the end of a long ward I found a tall Japanese screen, behind which stood an operating table with a woman on it undergoing electric treatment for a fibroid tumor. Apostoli, to whom I had just been presented, was managing the operation himself, while the students pushed and crowded against each other, jammed their way in and out or stood tip-toe, craning their necks unmercifully to get a glimpse of what was in progress. My sympathy went out for the poor woman, for she was of enormous dimensions, and that with a goodly sized tumor thrown into the bargain must have made the journey of life for her a matter of no mean affair. And then to think after carrying all that flesh and blood along the rugged *via vitæ*, to fetch up at last upon an operating table at the end of a long and crowded hospital ward, with half a dozen men performing a private examination upon her and a dozen or more idle, curious French students (plus one American) looking on! Strange, indeed, are the destinies of some folks! For the happiness of her fleshly mortality I hope the tumor was reduced, but I have my doubts about it, never having yet seen so fortunate a termination in the electric treatment of fibromata. Apostoli, whom I afterward had the pleasure of meeting at a banquet and reunion of *Des Trente*, a non-professional society of congenial ladies and gentlemen, given by way of novelty upon the first stage of the Eiffel Tower, I found to be most enthusiastic, yet sufficiently conservative in regard to the possibilities of electricity. His ideas have been so extensively published that it is unnecessary for me to dwell upon them here.

Of the staff of the Hotel Dieu, the acquaintance of none afforded me more pleasure than that of the late Professor Germain-Sée and of the distinguished surgeon Tillaux. The first time I met the former, he was seated at a small table surrounded by several students in one of the medical wards He bore his years remarkably well and his kindly old face lighted up with a pleasant smile as he chatted about America and some of the good that was being accomplished by us He was not a large man nor imposing in manner His countenance was round and friendly, his head was bald and he wore close cut side whiskers, leaving only the front and under part of the chin clean shaven In accordance with the law of the hospital, Germain-Sée should have been retired many years, as he was past the age at which the government allows a man to hold a hospital position So great, however, had been his services to medicine and so distinguished was his name, that an exception was made in his case and an extension of his time gladly granted His didactic lectures were always well attended In a small and poorly lighted room his class usually assembled, while he himself with one or two assistants would be seated behind a long, green baize covered table He always remained seated while lecturing, making use occasionally of brief notes His style was ideal for a scientific discourse It was decisive and clear-cut, and as the speaker leaned over the table toward his hearers and emphatically voiced his dogmatic opinions one could not help admiring the preciseness, the optimism and the fertility of resources evidently acquired by long years of valuable experience in contest with disease At times sparks of gentle humor would flash out of the discourse It was always a quiet, incisive sort of wit, rather than a broad rollicking humor Instead of a peal of laughter, it would merely produce a lively titter among the students, which would subside as quickly as it had arisen

In physique, disposition and manner, Tillaux is the very type of the old time surgeon, large, portly, full of inspiring confidence, moving about with a heavy tread and always speaking in an assertive, commanding tone of voice To "assist" (a word used by the ever-polite Frenchman for one who is merely a visitor) him in one of his morning visits to the wards of the hospital is good surgically and psychologically I was more than once inclined to wish that some of our younger surgeons had somewhat of the old-time dignity and courtliness about them It would not add one whit, of course, to their skill, but it certainly would lend a grace and pleasing manner to their noble art, and it would have somewhat of a beneficial effect upon the unstable, nervous condition of many of their patients Appearances count for something sometimes I would that I had space to relate more of what I saw at the famous Hotel Dieu, but I would then have to omit another great hospital, probably better known than the Hotel Dieu and that without doubt through the association of the world-renowned Charcot

From his residence, a typical elegant French apartment on the Boulevard St Germain, not far from the artistic Pont de Solferino the late Professor Charcot was wont to drive in his handsome brougham and pair every morning between 9 and 10 o'clock to the Salpêtrière Hospital at the other end of the city A pleasant way to reach the hospital, however, is to take one of the flying little propellors on the river and after a delightful sail past many ancient and modern landmarks, to land at the Pont d Austerlitz A few steps along the broad but not particularly elegant Boulevard de l'Hôpital will bring one in front of an old-fashioned building over the doorway of which will be seen engraved the words, *Hospice de la Vieillesse Femmes* Not far away rises the vast Halle aux Vins, which would presumably charm into ecstasies our bibulous friends, near by are the famous Jardin des Plantes, especially interesting to medical men as having been founded by Richelieu at the suggestion and solicitation of Labrosse, physician to Louis XIII How much more influential medical men have been and are to-day in the history and government of France than they are in America Why?

The Salpêtriere, named after a large saltpetre manufactory that was once in the vicinity, is said to be the largest almshouse in the world It consists of an irregular assemblage of buildings with surrounding gardens, courts and promenades, all covering an area of about seventy-four acres A brick wall surrounds the whole Altogether the various buildings comprise forty-five large blocks These are lighted by more than five thousand five hundred windows Louis XIII began building the institution as an arsenal, afterward using it to relieve Paris of the numerous beggars produced by his wars It was also used as a kind of general hospital Additional constructions were added to it at various times Louis XIV conferred upon it a large grant of lands and under this monarch its main building was erected after the designs of Liberal Bruant, the architect of the "Invalides" The most interesting architectural feature is the church built in the form of a Greek cross in the center of the grounds, and containing a fine altar, dating from 1670, beneath the center of the large octagonal dome Many of the main buildings are arranged in parallel lines with an archway beneath connecting the intervening courtyards The first of these buildings that one comes to after entering the gateway is the *Bâtiment Mazarin* built by the cardinal of that name for the aged and infirm women, who during their youth were servants in the establishment Their lodging was given to them gratuitously, they were allowed the same food they had been accustomed to as servants and which was better than that given to the paupers, but they were paid no wages In one of the yards with graveled walks and shady trees stood about a dozen brick buildings with overhanging roofs after the style of the Swiss chalets Each interior was a single apartment about fourteen feet square and was for the accommodation of a special *class* of insane The Salpêtrière is devoted to the care of the aged infirm, the insane, the epileptics, the idiots and the defective children The hospital proper was a detached building of three stories and an attic, and contained twenty-four "*salles des malades*" The "*salle aux bains*" is arranged in the "*rotunde*" with sixteen baths, each being surrounded with a white curtain and abundantly heated In 1850 a central workshop was organized for manufacturing and repairing, for destroying old linen and bedclothes and for preparing lint for dressings, etc There are shops for carpenters, joiners and carriage makers The wash-house built on an immense scale bleaches every year, it is said, 1,500 000 pieces of linen, not only for the hospital but also for the Hotel Dieu, the Charity and the Hôpital des Cliniques All except the insane department is open daily for visitors The inmates have special days upon which they may receive their friends On Sundays and fête days they may wear whatever clothing their fancy dictates but on other days the costume of the hospital blue in summer and gray in winter, must be donned There are entertainments, including music and dancing, arranged for the inmates. The cooking for the whole establishment is done in one immense kitchen. The insane of course eat in their own special dining room. The individual allowance consists of 10 decagrams of bread, 13 decagrams of meat, 45 centilitres of bouillon, a dish of vegetables, some dessert and 12 centilitres of wine. As for the insane department, the asylum is of course a very old one but its management is quite in accord with the most modern requirements. It will always be interesting on account of its association with the great reformer Pinel, a large and magnificent painting of whom striking off the chains of the grateful patients, hangs over the platform in the room in which Charcot held his public clinics.

In 1662 the institution contained nearly 10,000 people. During the Revolution the number of indigent females, the males being always sent to the companion institution the Bicêtre hospice out on the road toward Fontainebleau, was 7,000 or 8,000. Since that time the population has been steadily reduced and the management correspondingly improved. Statistics in regard to the number of inmates are obviously subject to much variation. In 1889 the total population consisted of about 6,311 souls, of these 590 were of unsound mind.

In passing it may be of interest to state that the Hospice de Bicêtre, named from John, Bishop of Winchester, Bichestre, Bicestre or Bicêtre, was founded by Richelieu in 1632 for retired soldiers. It is a most ungainly looking structure and resembles more an impregnable fortress than a hospital. It is for men what the Salpêtrière is for women, and with its rich clinic material Dejerine and others are doing some splendid work. The guillotine was first started in its deadly career here and within its walls Victor Hugo has placed the scene of his powerful story *Le Dernier Jour d' un Condamné*.

Much to my regret so much space has been already occupied that I can do but little more than mention the clinics of Professor Charcot. Having been the fortunate recipient of an autograph invitation to the home and public and private clinics of this great man, I had somewhat in my sketchbook that might have proved of interest. His uniform courtesy and kindliness, his warm feeling for America and Americans his enthusiasm and sincerity, his immense learning and clearness in imparting knowledge, his marvelous tact, gentility and preciseness could have elicited only praise from anyone who happened to know him, let alone from one who was his warm admirer. It is no wonder that, when he was gone, his great scientific attainments and his charming personality made it difficult for the authorities to fill his place. The story of his life, which has been often told, is a standing encouragement to every ambitious young doctor of slender means. Work, hard conscientious work, seems to have been its guiding motto.

Professor Charcot held his public clinics in a special hall at the Salpêtrière every Tuesday and Friday morning from 9 to 12 o'clock. Occasionally he would be delayed until near 10 o'clock. The hall was a long narrow room, lighted by small, square old-fashioned windows, with a large platform at one end and an ascending row of benches for the students. Over the platform hung the large painting of Pinel. On the platform were a long table for the use of his private pupils and assistants, and a series of high back benches for invited guests and the patients to be presented to the class. Aside from a loud ticking clock over one of the doors, the walls were devoid of every sort of ornament. From a small door leading out from an anteroom, we would follow the professor on to the platform, making a goodly sized procession of assistants, secretaries, students, guests, visitors and patients. The class upon the audience benches consisted of about one hundred and fifty men and women, intent, studious and ready with note books to take down the first words uttered by the lecturer. The professor always wore a small, tight-fitting scull-cap and remained sitting during the entire discourse. His style was smooth, regular and systematic, resembling a memorized sermon, and showing a calm, complete mastery of the subject in hand. Rarely, he would get up to make some examination himself upon a patient or indicate some point he was impressing upon a diagram. Usually his assistant, Gilles de la Tourette, would do that for him. He used very few gestures and generally would keep his gaze fixed upon the back of the room over the heads of the students, as though he were in a sort of reverie. He rarely attempted any humor, and when it did arise it usually had its origin in the patients or something apart from the speaker himself. Whenever he was lecturing upon any one special disease, he would line up a number of patients, as many as twelve or fifteen sometimes, upon the platform. If it were necessary he would insist upon their divesting themselves of every stitch of clothing, so that as some one said, they looked like a row of innocent Fiji Islanders. Rarely, if ever, did he put the women to this wholesome exposure. When the hour of noon arrived, a large gong would sound, the last sentence would be completed and in a quiet, methodic way the professor would suddenly rise and vanish through the side door.

In his daily private clinics, in a small room before half a dozen or more pupils, he would appear less methodic and showed more of his natural disposition toward friendship and personal intimacy. Here all kinds of cases would be examined, discussed and minutely studied. To observe him make a differential diagnosis, as for instance, between hysteria and syringomyelia in a man without a clear history, was a treat in close logic and correct inference. The French nation are reputed to be a neurotic people. At all events they present to the science of medicine a goodly amount of psychosis and neurosis for study. Happy was it that so calm, industrious, logical and dispassionate an observer as Charcot arose and studied amongst them. The debt which not only neurology but the whole of medicine owes to this master can never be repaid and will probably scarcely ever be equaled by another.

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THE EVIDENCE OF INSANITY, AN OUTLINE

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CHICAGO, ILL.

GENERAL CONSIDERATIONS

The whole question of insanity hinges on the *origin*, the *support* and the *display* of ideas. Its pathology has nothing distinctly characteristic, being merely a measure of functional incompetence whatever the coexistent facts. But as all motion is potential in ideas, ideation has its equivalent in molecular change and thus mental aberration has its physiologic concomitants.

No mortal can be said to be free from errors of fact or opinion of one kind or another, but comparatively few resist demonstration—logical, or objective refutation An idea that does not fit with popular belief is not necessarily a delusion Indeed, if it does not clash with any demonstrable principle or particular fact, it can not be regarded as a delusion, for we have no other means of proving it false than by such evidence It may be an intuitive prophecy or the product of a genius The grand steps of civilization were often due to conceptions which at their birth were commonly regarded as "off" or insane, and it is quite in keeping with the order of things that exceptionally profound minds should discover truths beyond the ken of contemporaneous comprehension The common mind the non-meditative, is so much a product of our political, educational and social machinery that comparatively few think deep enough to think much differently, and the machine-made creature or social puppet is regarded as quite sane though he may hold all the delusions agoing, which by and by are exploded by what he may call a "crank "

The higher walks of life are hardly freer from delusions than are the lower, to-wit Only a few years ago the so called Darwinian theory of evolution became epidemic in certain learned circles although based on absolutely nothing but circumstantial evidence Since then many of its votaries have so qualified the theory that it has lost its original peculiarity of something from nothing, and now it stands for little more than the progress of a plan as yet too feebly perceived to reveal much of origin and purpose, but disclosing the immutability of entities (characteristic or essential powers) by which chaos is precluded and progress assured What is potential in plan must be specific and definite in form, and can never intrinsically be less or more in essential characteristics One word more on this point Laws of nature are said to be immutable, they must be, or chaos would result But laws are not separable from things (entities), they are identical with their properties, therefore specific entities are immutable Again, specific entities must be created, not evolved (form and activity are conditioned by environment and have reference to growth and chemic union) They can not lose their intrinsic (specific) qualities unless we say it is a law that laws are not necessarily immutable, which is a *reductio ad absurdum* Evolution is extension not addition I am not writing to prove the delusional nature of Darwin's hypothesis, which by some has been accepted as an established fact But the logical results of a truth are not acts of insanity Some twenty years ago when the theory was dominant, and while its sister delusion "spontaneous generation" also had a spurt, a young Englishman, while out of employment and discouraged, suicided by jumping from a river bridge He left a note stating "man is but a monkey, so I didn't care to live" This was not an accurate statement of Darwin's idea, but it contained the popular notion having a fatalistic principle What is the criterion for this suicide's act? Was the act that of insanity, or was it a logical result of prospects, both immediate and remote, in the light of the existing conditions?

But the history of civilization is full of popular delusions varying and vacillating, and sometimes violently active They were originated as they also now are, by circumstantial evidence, a form of suggestion, and prevailing by virtue of a common fitness, a common degeneracy The familiar biblical expression, "my sheep ' implies both the idea of enfeeblement and the need of a leadership to overcome the prevailing delusions and conditions therefrom It applies now as then, for just as water can not rise above its own level, so the individual mind can not transcend its own powers of comprehension without extrinsic aid He needs the stimulus of a reinforcement, coördinate with cosmic plan It is a curious fact that in spite of the self-evident truth of our absolute dependence, we almost totally ignore it, and by our acts imply that the world was made wrong This is the root of criminality, which is the remote or immediate background of all insanities, and moral palsies—their last analysis

Definition of Insanity—A delusional state of mind fixed against reason By this I mean that a delusion exists either manifest, subconscious or latent, just as any idea may be, and that neither the logic of facts nor objective evidence are effectual to dissolve It applies equally to fleeting and fixed delusions Reason is futile for dissolution, although it may sometimes have a subduing or eclipsing effect for a time more or less brief This state is due to such a degree of brain inefficiency, that the energy production is inadequate for the attention required for a complete conception of the situation By a manifest delusion I mean a delusion so dominant that most of the subject's conduct is regulated by it, by a subconscious delusion I mean a delusion which is not manifest unless elicited by inquiry, by a latent delusion I mean a delusion which practically does not exist in definite form, but has existed, and although inquiry may only elicit a denial, certain circumstances may evolve it and in a violent manner, as in some forms of epilepsy and recurrent mania Such cases are both the most dangerous and most difficult to pass upon

Character of Delusions—A delusion is an idea which is incorrect in time or in place, or is non-existent in fact It becomes an insane delusion by virtue of its fixity against reason—the futility of argument

Origin—Insane delusions have three origins 1, delusions due to more or less remotely acquired errors of perception and with present mental incompetency—centric delusions, 2, delusions due to perceptive perversions of sensation arising within the nervous system, and with present mental incompetency—hallucinations, 3, delusions due to perceptive perversions of sensation arising at the periphery or end organs, and with present mental incompetency—illusions All three forms involve perception, reason and will

Support—1 An insane delusion may be more or less plausible by virtue of circumstantial evidence, as when some of the factors are truths, as is sometimes the case in delusions of conspiracy to deprive of property or personal liberty 2 An insane delusion may be monstrous, by containing a claim against all evidence or possibility, such as a claim to be the "mother of God" or a "horse" In my opinion many such delusions are not real, but sportive, as their subjects' conduct is commonly very inconsistent with the delusions

Display—1 An insane delusion may be, *a*, active or directly manifest and unreserved *b*, subconscious or indirectly manifest and reserved *c*, latent, as in lucid intervals, when it has no formal existence 2 They may be *a*, persistent, *b*, c [illegible] bl [illegible] urrent 3 They may be of *a*, gran [illegible] ower rank, form, etc , *b*, persecution, as of poisoning, torture, defamation, etc , *c*, debasement, as of personal vileness or incompetence, etc , 4 They may exist with *a*, excitement, *b*, depression, *c*, composure

The more centric physiologic concomitants of insanity are indicated by the degree of promptness, pertinence, distinctness, fluency and coherence of speech

The other physiologic concomitants, which may or may not be present, are tremors, palsies, incoördinate muscular movements, sensory defects, nutritional changes and emunctory irregularities in addition to the purely psychic phenomena

It may be stated as a rule that the less the physiologic concomitants are manifested the more obstinate the insanity, because the more insidious and subtle is the centric (cortical) defect It also may be said that as a rule hallucinations with insanity indicate the worst prognosis owing to their being due to a more gross physiologic disturbance of centric areas than are purely centric delusions, and which when they do not speedily recover, generally result in a more serious and permanent damage to the brain Illusions being due to peripheral perversions are as a rule the least serious indications

Whatever of abnormal mind is not included in my definition of insanity will come under the headings of moral palsy and criminalty

Definition of moral Paresis —A defective power of inhibition (will) to such an extent that although the subject may know a particular act is wrong, he is unable to refrain from doing it under special exciting circumstances or provocation It is due to a defective action of the brain which may be caused by cranial injury, shock, fever, poisoning, inherited fault, habits of dissipation of one kind or another, etc It includes some cases of inebriety, neurasthenias (hysteria, hypochondria, etc), fad manias (fanaticism), violent temper, vagrancies, prostitution, etc

Definition of Criminality —A disposition of conduct n which selfness is the ruling principle existing with the power of discernment and the power of choice It is due to a denial or eclipse of first principles The incentives are position, wealth and pleasure to be obtained at the expense of truth, justice and economy when in conflict with purpose There is a total absence of fraternal love in the humanitarian sense

In criminality there is a delusional origin in reference to First Principles, and is therefore constitutional Education is the remedy In insanity the delusional state is incidental to a pathologic cerebration, and can only be remedied by physiologic means The remedy for moral palsy is chiefly discipline

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THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration held at Atlanta Ga May 1896

BY EUGENE FOSTER, M D

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(*Continued from page 677*)

PROPOSITION 5

Notwithstanding a marked decrease has occurred in the total smallpox death rate, a still greater decrease has taken place in the smallpox death rate among children

From the mass of statistics at hand to demonstrate this proposition I select the evidence relative to the value of vaccination as shown by the enforcement of the compulsory laws of Great Britain

In reckoning the success or failure of compulsory vaccination in Great Britain, we must remember that the law was enacted to protect helpless children from the fatal consequences to themselves of obduracy or carelessness of the parent in failing to protect them from smallpox by having them vaccinated Let us take this epidemic of 1870-73, which has afforded vaccinophobists such an arsenal of facts to prove the worthlessness of vaccination, and see if in enacting compulsory vaccination laws the State exercised a wise and prudential care of its infantile population Prior to the enactment of compulsory vaccination laws, 70 to 80 per cent of the annual smallpox mortality of Great Britain was among children under 5 years old What has been the average annual mortality in this class since compulsory vaccination? Take England first The law requires vaccination of children at three months of age The compulsory vaccination law of 1853 was very defective in that the machinery provided for registration of births, and vaccinations thereafter, was not such as to enable the authorities to know and secure the vaccination of all the children falling within the provisions of the law Defective as it was in this respect, it yet had a salutary effect, for the vaccinations among this class were more than doubled over the same period anterior to the enactment of the law It must be admitted that this result was largely due to the knowledge of parents that if they failed to comply they laid themselves liable to a penalty for such neglect In a few years we see the annual smallpox death rate reduced to 55 per cent of the total mortality from this disease Fifty five per cent remained the average annual mortality in this class until the laws of 1867 and 1871 were enacted By the law of 1867 a full and proper system for registering compliances with the compulsory law was inaugurated Boards of Guardians throughout the kingdom were authorized by law to compel such compliances, and were given full authority to appoint officers whose duty should be to rigidly inquire into all failures to comply with the law When such persons were found, these officers should warn the delinquents to comply with the law within a specified time, and if such persons failed to heed the warning the officers were to institute legal proceedings to require compliance By the act of 1871 Boards of Guardians were required to appoint such officers The epidemic of small pox commenced in the latter part of 1870, and we are told that "only a portion of the population in England under 5 years of age was within the operation of the act of 1867 During the continuance of the epidemic a larger proportion came under its provisions, and some came also under the provisions of the act of 1871 The result was manifested in a reduction of the proportionate smallpox mortality under 5 years of age from 55 per cent of the entire mortality from that cause to 33 5 per cent in 1871, and to 30 per cent in 1872 The act of 1867, being in some of its most important requirements permissive only, had been carried out with various degrees of efficiency by different local authorities In those places in which the action taken under it had been tardy and ineffective, the mortality in young children amounted to or approached its old proportions, in those places in which such action had been commenced immediately on the act coming into operation, and been steadily continued, a remarkable diminution in that proportion was observed " [94]

LONDON

Anti vaccinists gleefully ask How about the smallpox death rate of London in 1870-73? Let us examine into the matter For twenty years prior to 1871, when the authorities provided gratuitous vaccination, but when compulsion was really nominal, the smallpox death rate of children under 5 years of age was more than 50 per cent of the total smallpox death rate From 1851-60 it was 59 5 per cent , and from 1861-70 it was 54 3 In 1871 and 1872, notwithstanding the negligence of the authorities of some of the unions in relation to enforcing vaccination, the average annual smallpox death rate of children under 5 years of age to the total of smallpox mortality was 36 7 In the epidemic of 1881 children under 5 years of age contributed only 27 8 per cent of the total smallpox mortality of London [95] In 1872, in Great Britain, only 85 per cent of the births were certified as successfully vaccinated Deducting the percentage of children having died before being vaccinated, the percentage vaccinated to the total births living was 94 per cent certified as successfully vaccinated

SCOTLAND

How about Scotland? Mr P A Taylor makes himself happy over the failures of compulsory vaccination in Scotland Upon what is his opinion based? Let us see Here is a fair test, for the compulsory vaccination law of Scotland was enacted Jan 1, 1864, and from that date to Dec 31, 1871, the report of the registrar general for Scotland states, that after a deduction had been made of all children who had died before they could be vaccinated, 96 5 per cent of all children alive were certified as having been successfully vaccinated One per cent was certified as being in such health as to prevent vaccination or having been repeatedly tried and found insusceptible, and 2 5 per cent unaccounted for on the registers From this it appears that the children in Scotland under 7 years of age were protected by vaccination to a remarkable degree But, as has been well said, "it is equally obvious that the whole infantile population can not be universally vaccinated, nor constitute a class among whom if smallpox prevail in the country there could be any reasonable expectation of meeting with complete exemption from that disease, for it includes, 1 all who are under the age by which vaccination is enforceable, of whom, of course a very large proportion would remain unvaccinated , 2, not a few somewhat above that age are still remaining unvaccinated from the carelessness of their parents in neglecting to have vaccination done till they had received legal notice of warning and risking it probably for some time after that, 3 children in whom there was postponement of vaccination on account of their state of health , and 4, many doubtless still unprotected among the cases which had appeared in each year s return as 'postponed,' 'insusceptible,' or 'unaccounted for' Now, as there are nearly 120 000 children born in Scotland each year who until they are 6 months old do not come under the operation of the law , as there are about 1,000 of each year s births carried on as 'postponed' or 'insusceptible' , and as there are about 2,500 annually respecting whom nothing is known it is quite certain that there must always at any given time be among the young population of Scotland extremely well protected as it is on the whole, a considerable actual number of unvaccinated children "

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[94] Dr Seaton's Report in Report of Medical Officer of Privy Council 1874

[95] Eleventh Annual Report of Medical Officer of the Local Government Board

Now for the results of this unprecedented vaccination in a community of civilians From year to year, prior to compulsory vaccination, the average annual smallpox mortality in children under 5 years of age amounted to 74 per cent of the total smallpox mortality in Scotland To fairly test the prophylaxis afforded by compulsory vaccination, we must take the children under 7 years of age, the epidemic having begun in 1871 The returns of the registrar general are only divided as follows Those under 5 years of age 5 to 20, 20 to 60, and those above 60 years of age We therefore take those under 5 years of age, they being only those which can be used to test the value of compulsory vaccination From the enactments of the compulsory law in 1864, the mortality of this class steadily declined from 74 per cent of the total smallpox mortality, until in the epidemic of 1871 it was for the whole of Scotland just 21 4 of the total smallpox mortality The mortality for the whole of Scotland had not been ascertained when Dr Seaton (from whose reports these data are extracted) rendered his report in 1874 But let us take the eight principal towns of Scotland, from which to derive further information on the subject

SMALLPOX DEATHS IN THE PRINCIPAL TOWNS OF SCOTLAND

Year	At all ages	Under 5 years of age	Deaths under 5 years of age per cent of total deaths
1871	886	195	22 0
1872	1,537	362	23 5
1873	467	124	26 5
1874 to June inclusive	302	69	22 8
Total, 3½ years	3 192	750	23 5

Well may the registrar general, in his report for 1872, say in his comments on that year— 'If the same relative mortality had taken place in children at that age (under 5 years) as occurred during the previous epidemics, when they were less efficiently protected by vaccination instead of only 362 children under 5 years of age having died from smallpox in the eight towns during 1872 3,370 would have died The enforcement of the vaccination act therefore during the seven previous years, appears to have had the effect in those eight towns alone, of saving the lives of upward of 3 000 children " So much for the direct proof from the history of Scotland as to the beneficent effect of compulsory vaccination Now let us compare the relative mortality of children under 5 years of age in Scotland with other countries A glance at the following table will show the superior effects of the law of Scotland

SEATON'S REPORT, 1874

Towns, or groups of towns, compared	Actual smallpox deaths under 5 years of age during the whole period of the epidemic in each town or group of towns	Smallpox deaths under 5 years of age during the whole period of the epidemic for equivalent population of 1 000 000 of all ages
Eight principal towns of Scotland (population 1,083,750), 1871–74	750	692
Berlin (population 882,569), 1871–72	2 837	3 448
Hamburg (population 338 974) 1871–72	1 938	5 717
Leipsic (population 106 925) 1871	659	6 200
Eight principal towns of Holland (population 693 080) 1870–72	4,474	6 445

Compare next the smallpox mortality under 5 years of age with the population living under that age, respectively, in the various towns or groups of towns [76]

Towns or groups of towns compared	Population living under 5 years of age	Smallpox deaths under 5 years old during entire period of the epidemic in each place	Smallpox deaths under 5 years of age during whole time of epidemic for equivalent of populations of 100 000 children under that age
Chief towns of Scotland (3½ yrs)	147,483	750	508
Berlin (2 years)	88 093	2,837	3 200
Leipsic (1 year)	8,545	65	7 712

These are the only towns in which the data for this last table were at hand for comparison when the table was formed in 1874 Assuredly there must be some patent reason for this variable death rate of infantile populations in the countries having compulsory vaccination laws Let us try and find it A brief review of the law, together with the manner of its enforcement in the respective places, will perhaps enable us to solve the problem

1 *Scotland* —We have just seen the wonderful utility of compulsory vaccination in Scotland in comparison with the other countries specified in the tables just given The law is stringently enforced, and the machinery therefor is complete, as evidenced by a vaccinated population under 5 years of age of 96½ per cent

2 *Berlin* —In Berlin the law required that all children should be vaccinated at one year of age No penalty however, was attached to neglect to comply with the law, unless smallpox follows such neglect The delinquents were rarely prosecuted, and a good proportion failed to have their children vaccinated until they attained school age All children seeking admittance to the public schools had to present a certificate of successful vaccination before being received therein Dr Guttstadt in 1873 attributed the high mortality in Berlin in the epidemic (1871 1872) to a large accumulated number of children, whose parents had failed to have them vaccinated at 1 year of age, as required by law

3 *Hamburg* —There was not at the time of the outbreak of the epidemic any compulsory law, and no means to prevent parents from neglecting to have their children vaccinated, except a law which required all children applying for places in the public schools to produce a certificate of successful vaccination Therefore it was common to find children who had attained 2 years of age, and often 7 or 8 years before vaccination was attempted This large residuum of unvaccinated children is sufficient to account for the greater prevalence of smallpox in Hamburg than in those of Scotland

4 *Leipsic* ⎱ The same was substantially true of these as in
5 *Holland* ⎰ Hamburg

IRELAND

What of compulsory vaccination in this country? triumphantly ask the anti vaccinists Let us test it first upon the children under 5 years of age, the class whom primarily the law was intended to protect The compulsory vaccination act of Ireland came of force Jan 1, 1864 The machinery for registration of compliances with the law as well as the lack of officers to warn delinquent parents whose children remained unvaccinated beyond the prescribed age (six months) and to take the necessary steps to enforce compliance with the law shows the act to b   defective than that   nd

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[76] Seat

ment board of Ireland, compared with the register of births from 1865 to 1872 inclusive, it is shown that 81 per cent of the births were vaccinated by the public vaccinators (The public vaccinators do almost the entire vaccinations in Ireland, except in the large towns) In Scotland the percentage of these vaccinations has been shown to be 96½ of every 100 births We therefore see that in Ireland there is always a very large residuum of unvaccinated children, there being in 1872 33,440 children who were not vaccinated until they had attained one year of age In 1873 there were 19,258 such cases Let us now compare the smallpox death rate of this class with the total smallpox mortality of the periods anterior and subsequent to the compulsory act Seventy nine per cent of the total smallpox mortality of Ireland was in children under 5 years of age, as shown in the report of the epidemiological society in 1853 Under the medical charities act, and the act of 1858, the public vaccinators had been enabled to reduce this percentage to 75 By the operation of the compulsory vaccination act, in 1865 and 1866, the percentage of this class of deaths was reduced to 50 From 1866 to 1871 smallpox was almost wholly absent from Ireland When the epidemic of smallpox began in 1871, it found the children under 7 years of old remarkably well vaccinated, and as a consequence we find the percentage of deaths in this class as follows 1871, 20 5, and in 1872, 25 per cent of the total smallpox mortality

Now let us take Dublin, one of the cities especially pointed out by anti vaccinists as an illustration of the utter failure of compulsory vaccination In Dublin, in the two years in which the epidemic prevailed, there were 1,557 deaths from smallpox Of this number 362, or 23 per cent, were in children under 5 years old Dr Seaton was unable to give the proportion which these 362 deaths bear to the total population living under 5 years of age But he shows the comparative mortality to the whole population of Dublin, and contrasts these with the following places The deaths under 5 years of age per million of living population in each place were as follows

Dublin,	1 150
Eight principal towns of Scotland,	692
Dundee,	1 584
Berlin	3 448
Hamburg,	5 717
Leipsic	6 200
Chief towns of Holland	6 455

Let us see what has been the result of compulsory vaccination upon the whole population of Ireland From the census taken in 1841 it was shown that for the previous ten years smallpox was the second most fatal disease in Ireland The deaths in that period of time were 58,000 When the census was taken in 1851 it was found to be the third most fatal disease For nineteen years previous to the act of 1863, the average annual mortality from smallpox was, as shown in the twenty first annual report of the poor law commissioners for Ireland, 2,640 The compulsory vaccination act of 1863 came of force at the time of decline of a considerable epidemic During the first year, which, it must be admitted, was too soon to be fairly claimed as wholly consequent upon the operation of the act, the deaths from smallpox were 854 From 1865 to 1870 inclusive, the smallpox mortality had fallen to such an extent as to be without precedent in the history of Ireland, being for the six years respectively 347, 180, 20, 19, 20 and 32 In the epidemic of 1871-1872, the deaths from smallpox were 665 in 1871, and 3,248 in 1872 Now let us compare the smallpox mortality of Ireland previous and subsequent to compulsory vaccination, and see what will be the result of the investigation For nineteen years previous to the compulsory vaccination the average annual deaths from smallpox were 2,624, for ten years subsequent to compulsory vaccination the annual smallpox deaths were 583 [7] Therefore we see that under compulsory vaccination for the ten years of its operation, as compared with the nineteen years anterior to it, the deaths were not a fourth of those in the non compulsory period

Propositon 6

In every epidemic of smallpox, the unvaccinated portion of the population has, without a single exception, shown a vastly greater proportional attack rate as well as death rate from smallpox relative to their numbers than the vaccinated

STATISTICS PROVING THIS PROPOSITION

In a severe epidemic of smallpox which prevailed at Norwich im 1819, Mr Cross minutely observed 112 families, in all of which there were cases of the disease, and the annexed table shows the result Among 215 persons unprotected by vaccination there were 200 cases of smallpox, and of these forty six proved fatal, while among ninety one vaccinated persons the only effects of this terrible infection were 1, that one girl, who had been vaccinated nine years, "had a mild disease, limited to twenty pocks, and lasted only six days before it began to decline," and 2, that another, who had been vaccinated five years, went through "the disease in half the time (of her unvaccinated sister) without danger or detriment, a few very minute pits upon the tip of the nose being the only permanent traces "

	Number	Cases of Smallpox	Deaths by Smallpox
Total number of persons in the 112 infected households	603	202	46
1 Protected by previous smallpox [8]	207		
2 Protected by vaccination	91	2	
3 Unprotected	215	200	46

By reference to the following table, it will be seen that, in a number of places observed, the death rate varies among the vaccinated from an inappreciably small mortality to 12½ per cent, that amongst the unprotected, it ranges from 14½ to 53 8 per cent

Death rate per 100 cases [9]

Places and times of observation	Total No of cases observed	Among the unprotected	Among the vaccinated
France, 1816-41	16 307	13 12	1
Quebec 1819-20		27	1 66
Philadelphia, 1825	240	60	0
Canton Vaud 1825-29	5 838	24	2 16
Darkehmen (Durkheim s), 1828-9	134	18 8	0
Verona, 1828 39	909	46 66	5 66
Milan 1830 51	10 210	38 83	7 66
Breslau, 1830-55	220	53 8	2 11
Württemberg 1831½-51½	1 142	27 12	7 1
Carniola 1834-35	441	16 25	4 4
Vienna Hospital 1834	860	51 25	12 5
Carinthia 1834-35	1 626	14 5	0 5
Adriatic 1835	1 102	15 33	2 8
Lower Austria, 1835	2 287	25 8	11 5
Bohemia 1835-55	15 640	29 8	5 16
Galicia 1836	1 059	23 5	5 14
Dalmatia, 1836	723	19 66	8 25
London Smallpox Hospital 1836-56	9 000	35	7
Vienna Hospital, 1837-56	6,213	30	5
Kiel, 1852-53	218	32	6
Württemberg no date	6 258	38 9	8 5
Malta no date	7,570	21 07	4 2
Epidemiological Society return no date	4 624	19 7	2 9

Compare the relative death rates from smallpox in London in the epidemic of smallpox for the year ending May 29, 1881, between the vaccinated and unvaccinated Here is the table taken from the Eleventh Annual Report of the Local Government Board, 1881-82

Death rate of people of subjoined ages	Per 1 000,000 of each age of the vaccinated class	Per 1 000 000 of each age of the unvaccinated class
All ages	90	3 350
Under 20 years	61	4 520
Under 5 years	10 5	5 950

Table D—Number of deaths and vaccinational condition of those being over 3 months and under 10 years of age who died from smallpox in England and Wales 1881-87

Vaccinational condition	Deaths 1881-87
Vaccinated	145
Unvaccinated	1 427
No statement	1 402
Total	2 974

Note—The unvaccinated are 90 8 per cent of those as to whose vaccinational condition there was information and 48 per cent of the whole

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[7] See Seaton s Report 1874

[8] Mr Cross mentions that he met with several who were supposed to have had smallpox formerly, yet (p 15) notwithstanding took it on this occasion but he does not state whether such cases are included in the above summary In this epidemic the vaccinated slept in the same rooms, and in some instances in the same beds, with those having smallpox So also (as quoted by Steinbrenner) in Copenhagen—of 650 vaccinated persons who suffered in the variolous epidemics 1823-27 only 5 died, being at the rate of 1 in 132 while of 176 unvaccinated persons who contracted the disease more than a fourth seems to have died, and of 153 others, who professed previously to have had smallpox there died 31 And similarly in the epidemic of 1828-30, and part of that of 1832-37 it seems that out of 228 unprotected patients 63 had died but of 1 373 cases of post vaccinal smallpox only 11 were fatal

[9] Brit and For Med Chir Rev, October, 1857

TABLE I —Proportion of deaths under and over 15 years of age per 1,000 deaths from smallpox in vaccinated and unvaccinated persons respectively, 1881-87 (excluding deaths under 3 months)

Age	Unvaccinated	Vaccinated
Three months and under 15 years	597	126
Fifteen years and upward	103	874
Total	1,000	1 000

TABLE II —Statistics of the smallpox epidemic in Chemnitz in 1870-71 (See 2d Report Royal Vaccination Commission of Great Britain 1890 page 236 Zeitschrift des Konigl Preuss Stat Bureau Jahrgang 12 1872 Art Die Pocken Epidemic in Berlin 1870-72 by D Guttstadt)

NOTE —Dr Max Schultz writing of Flinzer s statistics calls attention to the fact that they show there was 1 case of smallpox to every 255 households containing none but vaccinated persons but 1 to every 26 households containing both vaccinated and unvaccinated persons The figures prove the danger which unvaccinated persons are to the vaccinated and thereby establish the value of compulsory vaccination Vide Impfung Impfgeschaft etc Berlin 1888

Deaths —Of 3 596 cases 249 or 6 92 died Among the deaths are those of 117 boys 17 male adults 111 girls and 11 female adults All the children who died were unvaccinated, and of the adults 3 males and 4 females were vaccinated the remainder unvaccinated

Of the 249 deaths 242 were thus unvaccinated and only 7 of those vaccinated the former category contributing 97 19 and the latter 2 81 per cent of the deaths Separating the cases of smallpox among the vaccinated from those among the unvaccinated persons, we find that of the former only 0 73 per cent died, but that of the latter class 9 16 per cent died

Of the 221 cases in the town hospital 181 had been vaccinated 37 were unvaccinated and 3 were doubtful None of the vaccinated died but 11 of the unvaccinated succumbed to the disease (15 cases of unvaccinated children under 10)

Hence the accuracy of the following table given by Lotz on p 56 of his 'Pocken und Vaccination

Age	Vaccinated			Unvaccinated		
	Cases	Deaths	Mortality Per cent	Cases	Deaths	Mortality Per cent
For the 1st year	8			373	102	27 3
For the 2d year	15			528	51	9 6
For the 3d year	0			444	26	5 9
For the 4th year	1			331	29	6 3
For the 5th year	43			222	9	4 0
For the 6th year	35			197	7	3 6
For the 7th year	46			105	1	0 9
For the 8th year	28			98	2	2 0
For the 9th year	18			71	1	1 4
For the 10th year	71			71		0 0
Total under 10 years of age	265			2 410	220	9 0

(To be continued)

SOCIETY PROCEEDINGS

The American Public Health Association

[Special Correspondence of the JOURNAL]

The Twenty fourth Annual Meeting of the American Public Health Association held at Buffalo, N Y, Sept 15-18, 1896

The Executive Committee, in which all the business, other than reports of committees and presentation of papers, is practically done, and which is composed of the five officers, six elected members and the thirteen surviving ex presidents, nine of whom were actually in attendance, met at 10 A M, September 14, and was in continuous session the greater part of the day, and during the intervals of the regular sessions throughout the week

Ellicott Square, in which the meeting of the Association was held, is a marvel of modern construction, occupying the entire block of ground, the value of the site alone being rated at $1,000,000, and the cost of the building, complete in all its appointments, having amounted to $2,350,000 more The dimensions of the edifice are 240 x 200 feet, with an interior court 110 x 70 feet in size, glass roofed and giving abundant light to the 600 offices, 16 large counting rooms and 40 stores, besides the quarters of the Ellicott Club, which occupies nearly the whole uppermost (tenth) floor, and the assembly rooms on the second, in which the Association held its meetings The principal room was gracefully and appropriately draped with the national flags of the United States of America, Dominion of Canada and Republic of Mexico, which countries are represented in the membership, but the abominable acoustics of the hall, due to the numerous intervening columns, and the medley of noises from the streets, make it a trying ordeal for the speakers to reach their distant auditors The extensive daily programs for morning, afternoon and evening sessions were carried out without failure, and the interest of the members in their work was shown by their persistent attention and regular attendance to the adjournment on Friday afternoon

The appointed hour found about two hundred and fifty persons on the floor, the adjoining offices of the Treasurer and Local Committee being crowded with members awaiting their turns to register The Mexican contingent numbered thirty four persons and that from the neighboring Dominion almost as many more A number of women were present, and as a daily paper later commented "The languare of some of the papers opened their eyes to the brusque directness with which scientific sanitarians deal with rather intimately personal problems "

The Association was called to order by the President, Dr EDUARDO LICEAGA of the City of Mexico, promptly at 10 o'clock, and the session opened with prayer by the Rev Dr Thomas R Slicer of Buffalo, after which the President called to the platform and introduced to the members the distinguished founder of the Association, Prof STEPHEN SMITH of the city of New York, and its first President during the years 1872, 1873 and 1874, after which time he declined reelection Dr Smith, after responding to the enthusiastic welcome which greeted him, disclaimed any special merit in the creation of the Association, which he declared to have been the logical outcome of the times, and paid generous tribute to his associates in the work, especially Dr ELISHA HARRIS of New York, who with himself bore the entire expense of the early meetings He also instanced Dr Joseph M Toner of Washington, D C, Dr Edwin M Snow of Providence, R I, Dr John H Rauch of Chicago, Ill, Dr Ezra M Hunt of Trenton, N J, and Dr Charles B White of New Orleans, La, the latter the first of the Presidents to die, although all the others mentioned, who successively occupied the presidential office, and were his earnest co workers from the beginning have subsequently died He extolled the wisdom of the Association in having adhered to the practice of placing its mere working business in the hands of the Executive Committee, and thus removing disputations and time consuming contentions from the floor of the general meeting, to the interference with its legitimate and more important labors While it has included some of the best men in the profession among its members, there were many others who were not medical, among them the Rev Dr Osgood, Dorman B Eaton, Commissioner of Education, and others This Association does not limit its influence to those in actual attendance at its meetings The larger audience outside of the Association give it its distinctive character He was especially gratified at the interesting feature of its development, which has made it eminently all American, through the extension of its membership to Canada and Mexico, and hoped that Cuba and the Central American republics might also become part of it This international association is all the more gratifying since experts in sanitary science are aware that no single country can protect itself, except so far as the English system obtains of making localities clean, instead of remaining apart and trying to fight epidemics A clean country is primarily a healthy one The Transactions of this Association, he was proud to say, have become an invaluable compendium of sanitary science, and Florence Nightingale wrote, years ago, that she could gather nowhere in Europe such information as was to be obtained in the reports and papers published by this body Perhaps the grandest work accomplished by the Association has been in the development and extension of State boards of health all over this Union—and it is very gratifying to see by the programs the prominent part taken by officers and members of State and provincial and municipal boards of health in its work

On the conclusion of ex President Smith's remarks, the Chairman of the Local Committee of Arrangements Dr ERNEST WENDE of Buffalo Commissioner of Health of that city, made the customary announcements of entertainments tendered the members and their families, which in accordance with the traditional practice of this Association, were only such as would not interfere with the purposes of its assembly The Local Committee had prepared a very attractive, both in typography and contents, souvenir brochure, edited by Dr WILLIAM WARREN POTTER Chairman of the Committee on Printing, containing well executed portraits and biographic sketches of the officers, lists of committees and other necessary information especially valuable for new members, and a novelty in the way of a membership badge, having a gilt buffalo surmounting and suspending by a tri-colored riband a gilt emblematic pendant. Each member was further supplied with a little book of detachable coupons, entitling those duly accredited to daily afternoon drives in tally-ho coaches, intended especially for wives and families during the attendance of their husbands and fathers at the sessions, and admitting to excursions and receptions—a most admirable provision against the intrusion, common to such occasions, of persons in no way interested in the Association as entertainers or participants.

The report of the Executive Committee was presented by the Secretary of the Association, Dr. Irving A. Watson, Secretary of the State Board of Health of New Hampshire, who performed this duty for the fourteenth successive annual occasion, making the usual announcement of the prospective business of the session, and reporting a communication from the Association of Master Plumbers of Canada, signed by their Secretary, J. C. Hughes, of Montreal, recommending the constitution of a committee on sanitation with special reference to drainage, plumbing and ventilation of public and private buildings, and such a special committee of five members was thereupon authorized. The Executive Committee further recommended the passage of a resolution, introduced by Dr. Samuel H. Durgin, Health Officer of the city of Boston, reviving the committee on disinfectants and disinfection, whose former report has been so many years the standard authority on these subjects, but which in view of recent experimental research and discoveries ought to be given the opportunity of including this later knowledge. The Secretary then reported the names of fifty-three new members, recommended by the Executive Committee for election, which was accordingly done by vote of the Association.

The eminently practical and expeditious manner in which this Association dispatches its routine and administrative business through its Executive Committee, permitted the legitimate work of the session to begin promptly at 10.45 a.m., with the "Report of the Committee on Car Sanitation," by Dr. Granville P. Conn, President of the State Board of Health of New Hampshire, Chairman. This report attributed much of the opposition of railway corporations to their disinclination to submit to the interference with their business and the expenses which the necessary charges required for their improved sanitation would involve. It spoke of bad ventilation of passenger coaches as worse than their overheating, denounced the objectionable practice of closing windows and locking doors after a trip, instead of throwing them wide open for thorough airing, and advocated the abrogation of the existing system of urinals. It backed the American railway employe against the world for disregard of passengers' comfort, and for habitual insolence nothing could equal the negro porter. It commended the *train de luxe* from Paris to Marseilles as an instance of what can be done to promote the health and comfort of travelers and wondered that any one who has had the opportunity of contrasting this service with the American system could hesitate to give credit where it belonged.

Two papers on the same subject followed: "Observations on the Cleaning of Railroad Passenger Cars," by Dr. Domingo Orvananos, of the City of Mexico, Secretary of the Superior Board of Health of the Republic of Mexico; "Possibilities of Contagion of Venereal Diseases in Railway Cars," by Dr. Tomas Noriega, delegate from the State of Chiapas, Mexico. The former advocated instead of the customary slipshod method of washing coaches that they should be carefully gone over with sponges saturated with a solution of mercuric bichlorid, that the coverings of seats and backs should be frequently changed and washed at every terminal station. Dr. Noriega narrated instances in his experience of purulent ophthalmias, unmistakably one to infection in Pullman car lavatories, resulting in total loss of vision of one or both eyes. He said that reform was necessary especially in beds, lavatories and water closets, and that in the latter, impermeable paper covers, to be removed after each visit, should replace the present permanent wooden seats. In the discussion which followed, Dr. Valentine of New York quoted the case of a bride, referred to him by another physician, who had contracted a specific ulcer on her lip by drinking from a public ice water cup, and said that in Antwerp he had seen fresh wooden covers supplied to each new occupant of a water closet. Dr. Kinyoun of the U. S. Marine Hospital Service, said that the hygiene laboratory of that service under his direction had been long engaged in investigating railway sanitation, and said that experiments were being made as to the proper disinfection of cars by subjecting all the several materials used in furnishing coaches to various processes. He suggested the inquiry as to the greater prevalence of cases of tuberculosis and diphtheria at the railway terminals and at the resorts for invalids affected with these diseases. He said the impure water supply in the railway service was responsible for many cases of diarrheal and enteric diseases, and declared that it was significant that the presidents and high officials of these companies do not drink the water they furnish to passengers.

The "Report of the Committee on Steamship and Steamboat Sanitation," by Dr. Frederick Montizambert, of Toronto, General Superintendent of Quarantines of the Dominion of Canada, Chairman, was then read. Dr. Montizambert said he had little to add to the reports made by the former Chairmen of the Committee, Dr. Durgin of Massachusetts, in 1891, and Dr. Gihon, U. S. Navy, in 1893, except to call attention to the proposed disinfection of ships by the electrolysis of sea water, a process actually in use by the French companies of the *Messageries Maritimes*. At the exhibition at Boulogne sur Mer, there was an automatic apparatus no larger than a coal scuttle, which could be connected with the ordinary electric plant by a couple of wires and was capable of producing three hundred liters of electrolyzed sea water per hour. The usual methods of disinfection, involving the employment of costly materials, were malodorous and left much to be desired.

Dr. Horlbeck, of Charleston, S. C., declared that enough had not been said about the wretched sanitary condition of our coastwise passenger steamships, and Dr. Gihon, U. S. N., described his present knowledge of the deplorable condition of the saloons of these vessels during their late autumn passages when crowded with consumptive invalids on their way to health resorts in Florida.

AFTERNOON SESSION.

The afternoon session began 3 p.m. with a paper on "The Composition and Infectiousness of Milk," by Dr. James F. Kennedy, of Des Moines, Iowa, Secretary of the State Board of Health of Iowa, and was an exhaustive inquiry into the relative mortality of breast fed children and those fed on milk, the latter being greatly in excess. He attributed a large proportion of the deaths to inanition from dilution with water, which is not only a fraud against the buyer but a crime against the children, who are literally starved to death. He narrated epidemics due to infected milk, which was a greater source of danger than dilution, and described the many ways by which morbific germs are introduced into milk—by washing pails with impure water, by the settling in pails and cans of dried germs floating in the polluted air of stable yards, by the unclean hands of milkers, and after reaching consumers by the filthy habits of occupants of insanitary houses. He declared the remedies to be inspection, cleanliness and sterilization.

The next paper on the program was "On Pure Milk," by Dr. Gardner T. Swarts, of Providence, R. I., Secretary of the State Board of Health of Rhode Island, who deplored the neglect of milk inspectors and physicians in his own State to ascertain the actual condition of the milk supply. He said that most of the enteritis of children was certainly due to filthy milk. He urged the establishment everywhere of milk farms similar to those near Buffalo, where the modus operandi of milking and delivering milk is carried out under the most healthful conditions and the purity of the milk certified by reputable physicians. The price of such milk must necessarily be higher, and it is only by educating the public that they can be made to pay the difference and to secure immunity from disease, which is more surely done in this way than by sterilization. There are people to-day who prefer dirty milk at four cents to good milk at eight.

The "Report of the Committee on Animal Diseases and Animal Food" was then read by Dr. D. E. Salmon, D.V.M., of Washington, D. C., Chief of the Bureau of Animal Industry, Department of Agriculture, Chairman, who, while describing how much had been done in the matter of animal diseases, said that the public still needed to be educated respecting them. Outbreaks of anthrax were undoubtedly becoming more frequent. While common in Europe, this disease had been rare here. The spores of the bacillus survive for years and are distributed through carelessness in the disposal of dead animals. The carcases should be saturated with coal oil and burned to ashes. Hides and wool are dangerous and even the hay from infected meadows used for packing crockery and glass. Tuberculosis is the subject of much attention on the part of the government, which, however, can only prevent the shipment of diseased cattle to other States, but has no control over its local sale. Tuberculous cows and swine are often found in the abattoirs, but there is necessity for cooperation between Federal and local inspectors. Some local firms insist on selling condemned carcases. The committee testifies to the amicable relations between the Bureau of Animal Industry and the

State Boards of Health, due largely to the influence of this Association An interesting part of the report dealt with rabies, which declared that while there was no need of alarming people, it was a duty to inform the public that such a disease does exist and is a menace to health and safety The Chairman had sometime ago to combat the theory that there was no such disease as Texas fever Is it reasonable to believe that a disease that has been described for two thousand years is a myth because a few physicians have never seen a case The committee has sufficient positive evidence to establish its existence and characteristics, and recommends the measures for reducing the number of worthless dogs be rigidly enforced, and that all others allowed to run at large be muzzled

This group of papers attracted great attention and provoked a very lively discussion Dr BAILHACHE while approving of the thorough supervision and inspection of dairies and dairy products recommended by Dr GARDNER T SWARTS, doubted its practicability Dr LEE of Philadelphia took issue with Dr KENNEDY respecting the sterilization of milk, in which he did not believe we had arrived at a sanitary ultimatum Since the practice two diseases have become prominent —infantile scurvy and rickets—which were not recognized when he studied medicine Fresh pure milk is better than sterilized, but he agreed if we are to cook milk at all we had better do it thoroughly Boiled milk is better than sterilized Dr HIBBERD of Indiana, ex President of the AMERICAN MEDICAL ASSOCIATION, questioned whether it had been established that any child had been diseased by milk from tuberculous cows, taken into its stomach He had never had a positive, indisputable reply to the question Can tubercle bacilli pass the digestive organs? He believed that sterilized milk starved children to death Dr LYMAN of Massachusetts said as it was possible for a child to be exposed to cold and not take cold, it was equally possible for it to live in a family where tuberculosis and similar diseases exist and not contract them He believed that the development of the general health by proper sanitary environments will be a better protection against disease than any special method of asepsis Dr CARTER of Des Moines, Iowa said it was a frightful fact that dairies are as a rule, filthy, that the cows are filthy and kept in filthy places and milked by men who are both filthy and diseased He had employed a man who had been previously employed for two years and when he saw that he did not wash his hands nor the cow's udder and remonstrated with him, he declared that he had never done so, and a second milker, who had also been working a year in a dairy, made the same admission He was opposed to muzzling dogs and thought a shot gun was a better protection against rabies Dr HOLTON of Brattleboro, Vt, agreed with Dr HIBBERD and said he had tried to find an undoubted case where tuberculosis had been communicated by the milk or flesh of the bovine race and had not found one He believed heredity, etc, accounted for the development of certain diseases He had for a year and a half without knowing it, drank milk from a tuberculous cow, subsequently discovered to be the worst in the herd He called attention to the danger from substituting patented food for milk

Dr KINYOUN and Dr SALMON controverted the statements of Drs HIBBERD and HOLTON that the infection of human beings by diseased animals had not been established When we consider that tuberculosis may be produced in animals by feeding them upon tuberculous tissues and find children die from tuberculous disease and know that the tubercle bacillus does penetrate the intestine, we are justified in inferring this as the source of their disease As to making children strong rather than destroy disease germs, it is the fact that the robust often die and the sickly do not Immunity does not depend on the strength of the individual We do not know how frequent this infection was twenty five years ago, and we would not know to day but for the tests that have been established How does Dr HOLTON know that the milk he drank was infected?

The next paper, "Contributions to the Study of the Pathogeny, Etiology and Prophylaxis of Typhus," by Dr FRANCISCO DE P BERNALDEZ, delegate from the State of Oaxaca, Mexico, was a very able presentation of the subject based on personal observations in many epidemics, and Dr Bernaldez's conclusions as to the limited contagiousness of this disease were accepted without discussion

The "Report of the Committee on Nomenclature and Forms of Statistics," by Dr SAMUEL W ABBOTT of Wakefield Mass Secretary of the State Board of Health of Massachusetts, Chairman, was read by Dr Walter Suiter of New York, particularized the latest changes in nomenclature by the College of Physicians of London, and was supplemented by a paper "On the Nomenclature of Diseases and Forms of Statistics," by Dr. EDUARD LICEAGA of the City of Mexico, President of the Association, and one "On Need of Uniformity in the Meaning of the term Stillborn," by Dr JESUS E MONJARAS of the City of San Luis Potosi, Mexico, Director of Hygiene of the State of San Luis Potosi

Dr LINDSLEY of New Haven, Conn, expressed his appreciation of the great importance of this series of papers There were a number of States which do not yet take sufficient interest in vital statistics, and as uniformity in nomenclature is the essential basis of an exact system of statistics, he hoped the Committee would be continued

The paper "On Dengue," by Dr HENRY D HORLBECK of Charleston, S C, Health Officer of Charleston, was an interesting account of the great epidemic of that disease at Charleston

A paper "On Municipal Responsibility for Healthy School houses," by Mrs ELLEN H RICHARDS, of the Institute of Technology, Boston Mass, was read by Dr Durgin, Health Officer of Boston, and one "On Woman in Preventive Medicine," by Mrs HARIETTA M PLUNKETT, President of House of Mercy Hospital, Pittsfield, Mass was read by title

EVENING SESSION

The evening session, to which the public was especially invited, was promptly called to order at 8 P M by the First Vice President, Lieutenant Colonel ALFRED A WOODHULL of the Medical Department of the United States Army, who most efficiently assisted President Liceaga throughout the entire meeting of the Association The session was opened with an address by His Honor EDGAR B JEWETT, Mayor of the city of Buffalo, who very gracefully welcomed the Association to Buffalo, and invited the members to inspect the administration of the city's affairs in their bearing upon the public health Mayor Jewett was followed by the Reverend Dr THOMAS R SLICER He said in part "I address you to night simply as a citizen of the city of the lowest death rate in the United States, who is interested in conserving the public health of that city to a still greater extent The word city is the watchword at once of your opportunity and your peril You all have seen the dwellers in the country violating all of the rules of health and seemingly being themselves healthier than those who live in cities In the grouping of so many together there is a sense of power that is not found in the country It is because of this sense of power that lies in the binding of lives together that we at once should have a sense of insecurity and a hope of power But, more than this, there is that civic consciousness which belongs to every city Buffalo, as an example, has no civic consciousness It has not the civic consciousness which marks Birmingham, Glasgow or even Chicago It is, so far as we have gone, a group of contiguous tribes I do not now refer to their nationality, though that is also true, but to their diverse interests to their alien training, to their want of common purposes in this city Chicago would not be where it is to day were it not for its civic consciousness, and if it had not had the opportunity of the Columbian Exposition Until civic consciousness arrives in municipal life it is almost a continuous upgrade for the guardians of the public health There is a constant warfare with ignorance and avarice Some of us do not know enough to protect ourselves against contagion Let me add in conclusion that the Health Department of any city has no business at that trough from which the politician feeds How many of you have not come in contact with that parsimony that will deny $1,000 for a bacteriologist and spends $2,000 on a junketing trip for a Board of Aldermen?"

The program had provided for an address on the part of the members from the Dominion of Canada, by the Honorable RICHARD HARCOURT, Provincial Treasurer of Ontario and Minister of Health but having been unavoidably detained, Dr PETER H BRYCE of Toronto, Secretary of the Provincial Board of Health of Ontario, acceptably supplied his place in a brief extemporaneous address

This was followed by the annual address of the President of the American Public Health Association, Dr EDUARDO LICEAGA, of the City of Mexico, President of the Superior Board of Health of the Republic of Mexico The President's address from the standpoint of a sanitarian in a body of advanced and experienced sanitarians was an able and forceful paper It was written in English by the President, but was read at his request by his friend Medical Director ALBERT L GIHON, U S Navy a former president of the Association It related principally to the business of the Association and went into a history of the growth and development of the study of public hygiene in Mexico, which Dr Licéaga said had been fostered and encouraged under the administration of President Diaz during the last twenty years Some of the suggestions made by Dr Licéaga were of great value and interest He laid before the Association the proposition that it should devote special attention to the study of contagious diseases, with view not only to their cure and the prevention of epidemics, but to the means of preventing the development of individual cases The several phases of the subject of epidemics were taken up separately and treated in an exhaustive manner One proposition put forth by Dr Licéaga was that isolation in infectious diseases is not so essential in some diseases as in others, and that the study of the extent to which it should be practiced would repay investigation Another proposition was that more attention should be paid to the study of the technique of disinfection These and many other phases of the broad subject of contagion could be studied by uniform methods over a vast extent of territory by the members of the Association, with great results Another question which Dr Licéaga thinks merits investigation is the ascertainment of the period within which any disease is contagious and the person affected dangerous to his neighbors This is something in regard to which much uncertainty still exists, and definite knowledge in this regard would be of incalculable value Dr Licéaga recommends also that a special committee for the investigation of the subject of the prevention of disease, particularly by vaccination and inoculation, should be appointed, and made reference to the newly developed sero therapy, which he declared was already falling into disrepute through the use of imperfect or contaminated serum A committee to devise a means for the use and sale of only absolutely pure and perfect serum, should be appointed In conclusion Dr Licéaga said "Gentlemen of the American Public Health Association, I beg to offer you my sincere congratulations on our coming again together in the twenty fourth meeting of this Association, and on having selected for the place of our meeting this beautiful and interesting city, which is so splendidly placed at the Eastern end of this delicious lake, a lake that supplies the water for this powerful river that farther on precipitates itself into a grand cataract, a stupendous marvel of nature that thousands of pilgrims from all parts of the world come to contemplate and admire, in this city which offers to us its hospitality and affords us an opportunity of again meeting to render our homage to science and to work together for the physical well being of our fellow creatures "

(*To be continued*)

Mississippi Valley Medical Association

Twenty-second Annual Meeting, held at St Paul, Minn , Sept 15 18, 1896

The meeting opened with a very satisfactory attendance, Dr H O Walker, of Detroit, presiding

Dr Charles A Wheaton, of St Paul, Chairman of the Committee of Arrangements, called the meeting to order, and introduced Archbishop Ireland, who delivered the invocation

Governor Clough of Minnesota delivered the address of welcome on behalf of the State He said he was obliged to admit that he was no orator, and that he had always been more or less timid in the presence of a physician, but of his hearty welcome to the State all members of the Mississippi Valley Medical Association might be assured

Hon F B Doran, Mayor of St Paul, delivered an eloquent address of welcome on behalf of the city He referred to the reputation of St Paul for hospitality won by the recent encampment of the G A R , and he said that upon that occasion the city had welcomed the men who had preserved the nation, while now she welcomed the men who preserved the bodies of the nation's defenders

Dr A J Stone delivered the address of welcome on the part of the profession He paid a glowing tribute to the profession of St Paul, the absence of professional jealousy, disagreement and ill feeling, while he begged to assure the visiting profession that they were most heartily welcome He also took occasion to speak of the great help the ladies of St Paul had been to the committee in making the arrangements In speaking of Minnesota as a health resort he said it had proved a Mecca for consumptives, and notwithstanding the fact that many cases of tuberculosis came to St Paul when in the last stage and when beyond all hope, die there, are included in the mortality, and notwithstanding this fact the mortality of this city is the lowest of any in the world

Dr H O Walker took the chair and thanked the speakers for the welcome they had extended In casting about for a subject upon which to deliver the annual address he had decided to relate some experiences he had had rather than thresh over the various subjects which are dealt with at length in the various medical journals He took for his title "Some Experience of Surgery of the Kidney " (To be published in full in the Journal)

The report of the Treasurer was not read, by reason of Dr H N Moyer's absence on account of sickness

The program opened in the afternoon session with a paper by Dr Truman W Brophy, of Chicago, who presented a

NEW OPERATION FOR CLEFT PALATE

He took the ground that the operation should be performed much earlier than had been done heretofore by surgeons, and that the idea that the operation should be postponed until the child reached the age of three to seven years was an erroneous one for the reason that the changes in the voice would by that time have become permanent and the correction becomes almost an impossibility The operation suggested by the author was the cutting of the edges of the cleft and then suturing them by wire sutures secured through a lead plate on each side of the palate, and made to conform to the same In the hands of the author the operation had been uniformly successful

Dr W H Daly, Pittsburg in discussion said I think the essayist has made a marked advance in the operation for cleft palate, the most important point being its adaptability to very young children, as I think it does away with all former objections to operating on the young infant The greatest disappointment I have had in these cases is the poor articulation which follows the operation, and which is always a source of great disappointment to the patient and family, who always expect to hear perfect speech immediately after an operation, and I think this result will be attained in Dr Brophy's operation

Dr G Futterer, of Chicago, read a paper entitled

PLEURITIC EFFUSIONS AND THEIR TREATMENT

The author took the ground that a bacteriologic examination should be made in all cases The diathesis in cases of pleurisy should also be most carefully looked into, as cases of uric acid are frequently found in connection with pleurisy, these yield readily to the administration of salicylates, and but about 15 per cent of the cases of pleurisy are believed to be pneumatic The pleurisy of typhoid fever was also considered by the author, who did not believe it was a mixed infection, but that it was a distinct condition As to the presence of tubercle bacilli in pleuritic effusions, Dr Futterer believed that they may enter through the alveolar septa and enter the pleura without producing serious effect in the lungs The author has washed out the cavity in fourteen cases with an antiseptic solution, with success in twelve The agar culture should be used to differentiate between tuberculosis and pleurisy The advantages to be gained by this treatment is that many patients will submit to it when they will not submit to the excision of a rib

Dr Gustavus M Blech of Detroit, read a paper on the

TREATMENT OF INFLAMMATORY DISEASE OF THE STOMACH.

The author criticised the old routine methods of treating acute inflammatory disease of the stomach with menthol, ice, cocain, opium, purgations, cathartics, pepsin, etc , for the reason that they did not cure the patient and the physician was too liable to delude himself into the belief that he had cured his patient because he did not return, which the author claimed was in nearly every instance due to the fact that the treatment did him no good The reason that was given for the failure to cure the catarrhal condition of the stomach was that we are too prone to attempt to prescribe remedies for the relief of symptoms only and not sufficient attention being given to relieving the pathologic condition which prevent the digestive process from being normal The use of strong antiseptics, which seem to be indicated are more likely to do more harm than good by reason of the destructive action of strong antiseptics have on animal and vegetable cells The treatment may be summarized into

1, destroy the morbid element which is present in the stomach so as to thoroughly cleanse the mucous membrane, 2, heal the diseased surface after it has been made aseptic For the cleansing the author has found hydrozone the most satisfactory He uses a tumblerful of lukewarm water containing a 2 per cent of hydrozone, half an hour before meals The nascent oxygen which is set free in the stomach by the oxidizing agent destroys the morbid element and cleanses the mucous membrane As a healing agent glycozone in one to two dram doses immediately after meals, is recommended This treatment is strongly urged in gastric ulcer

Dr F Hunt Stucky, Louisville, Ky —I desire to emphasize the value of perfect lavage in cases of gastritis I would also urge the careful attention to dietetics as well as any intestinal disorder that may exist in connection with the gastritis There must also be something in addition to the antisepsis, the nervous system should be built up and attention paid to any circulatory disturbance I believe massage would be valuable in many of these cases

Dr I N Love, St Louis—I do not believe in limiting the treatment to any one agent, the entire tract must always be kept in mind and the application or administration is but one of many things to be done We can not separate one set of secretory glands from another but must give attention to them all and in these cases I believe especial attention should be paid to diaphoresis, massage is also to be recommended in a certain proportion of cases I believe there are many persons suffering to day from an auto toxemia due to a disordered stomach and that 90 per cent of these cases can be laid at the door of constipation Lavage of plain water as well as drinking large quantities of water just before eating I think a great help toward starting the current downward and outward The habits of lavage has done much harm and I do not believe it should be intrusted to the patient to carry out

Dr W H Daly, Pittsburg—I have had anything but satisfactory results from lavage, the treatment suggested, and do not favor it I heartily agree with the speaker regarding the toxemia for I heartily believe that a very large proportion of these stomachic diseases are due to toxemia and the most important thing to do is to consider every one of these cases as a rule unto itself and treat them individually A good idea is to give a lavage of a gallon of water and then empty the stomach by irritating the throat with the finger when a cleansing result is desired

Dr C H Hughes, St Louis—The most important factor in the handling of this class of cases is to treat your patient all over Medical men of the present day in treating dyspepsia have been forced to the conclusion that the individual is possessed of a pneumo gastric nerve and that it plays a most important part in this disease, which has so long been considered as a local one You take for example a case of nasal catarrh which goes the round of treatment at the hands of the rhinologists, who apply the spray, cautery, remove spurs from the septum, etc , and what is the result? Are the cases cured? No, because the attendant is too prone to treat the disease as a purely local one and not through the nervous system as should be done

Dr F F Lawrence, Columbus—The frequent occurrence of dyspepsia in connection with gallstones has suggested the possibility of its being secondary to this condition We have all known of cases when the patient has consulted the physician for the relief of the usual train of symptoms which would indicate gastro intestinal disorders and without relief until an abdominal surgeon looking for ovaries he may remove, opens the abdomen and finds gallstones, after the removal of which the gastro intestinal symptoms disappear

Dr J M Mathews Louisville—I would like to suggest that the author of the paper did not attempt to treat nasal catarrh hysteria, or some of the other diseases the gentlemen have referred to The paper dealt with a certain class of gastric disease and the treatment is precisely what you would adopt should you have an ulcer or acute inflammation located in any other region and I think we should bear in mind that if we want to have successful results we must get at the local conditions in these cases

Dr H T Patrick, Chicago—I think there is some value in the suggestion of the esssayist but I am opposed to the presentation of a cure for a condition as complex in its nature as gastritis without stating more specifically what form it is I think the important thing to do first is to decide upon what particular form of the disease we have to deal with, then the cause and we can then apply our cleansing and antiseptic treatment

Dr I A Abt, St Louis—We should not for a moment lose sight of the fact that we have a pathology for all these forms of gastritis, whether it be from alcohol, tobacco or any other cause In making this differential diagnosis lavage will be of particular value I am firmly of the belief that many of these cases are due to toxins

Dr J A Larrabee, Louisville—I am convinced that the portal circulation is more often at fault in these cases than is generally supposed and its correction too often neglected Exercise is above all things the most important and should be insisted upon in order to direct the blood to other and healthier channels While I do not propose to discard the use of antiseptics I will place more reliance on treating the portal circulation

Dr W S Caldwell, Freeport, Ohio—I use the stomach tube for diagnosis purposes principally and when I find that there is neither fluid or debris forming in the stomach I keep the tube out, although where I find much fluid accumulated in the stomach in the morning I wash it out with the tube

Dr Paul Paquin, of St Louis, read a paper entitled

THE TREATMENT OF EXPERIMENTAL TUBERCULOSIS IN ANIMALS BY THE USE OF BLOOD SERUM

(It will be published in full in the Journal)

Dr H Longstreet Taylor, St Paul—I desire to say just one word on tuberclin and its modifications Although the essayist says that it acts by producing an antitoxin, yet this has not and can not be proved It may be the true explanation although the observed fact of an active leucocytosis in tubercular areas during its use is a more plausible explanation Tuberculosis in its various manifestations presents such a complicated future and such a complex one that the very existence of an antitoxin is problematic and even if found it could not be a specific in the sense that the antitoxins of the acute diseases, as diphtheria, are specifics Tuberculin is very much in disrepute here and everywhere, but it has a few constant friends yet among whom I stand, and with good reason, for in careful hands undoubted results are obtained with it I have, for instance, only recently seen the glands, in three cases of undoubted glandular tuberculosis, disappear under its use, what more convincing experiment could one desire?

In a long series of cases my results with tuberculin have been eminently satisfactory With the St Louis serum, however, I have not been able to obtain results All the cases upon which I have used it grew worse Still from a short series no results can properly be claimed, for more than in any other disease probably are statistics difficult of comparison in tuberculosis

Dr Jos Muir, New York—My experience has been large and varied in the therapeusis of tuberculous disease and for years I have used tuberculin and all its modifications, especially those of Hunter, Maclean, Klebs, Kitasato, aside from these, modifications of my own consisting of different percentages of toxic albumoses, the logic being that the maximum of irritation was gradually reached within and around that impenetrable wall, which surrounds all anatomic tubercles Dr Paquin is scarcely satisfactory in his theories regarding the physiologic action of his serum in tuberculous areas but his paper is teeming with statistics, some one has said, Beaconsfield I believe, that statistics consist of three classes, lies, damn lies and statistics The curability of consumption can not be judged by statistics Its curability has been known from time immemorial since the days of the early Greeks Milk was the great agent in the treatment and continues to be so to the present time—so from the fullness of statistics I may cite the case of Professor Emmerick in an article written by him somewhat over a year ago and in which he gave the history of ten cases of sarcoma and carcinoma cured by serum obtained of the erysipelas and prodigiosus toxins It was afterward proven that one of the cases referred to had been dead two months prior to the reading of the report

Dr Barclay, Pittsburg, Pa , complimented Dr Paquin and congratulated the profession on the earnest and honest investigations made He felt that the absolute candor of the reports should command the attention of the profession

Dr H W Loeb, St Louis, Mo—I have known several cases of laryngeal tuberculosis treated with serum and knew of one case in which Paquin's serum had given remarkably good results In others it had been less successful I consider serotherapy more promising in the treatment of other forms of tuberculosis than that of the throat I will report a case of a man who, six years ago was examined by six competent physicians who pronounced the case one of tuberculosis with a fatal prognosis The serum was used and to day the man feels perfectly well and all physical signs of the disease have disappeared except a slight thickening of the arytenoids I have confidence in the treatments in laryngeal tuberculosis, and one fact I have noted is that when first administered the larynx improves wonderfully even though it again resume its downward course

Dr W H Daly, Pittsburg—There is one thing to be remembered in our enthusiasm over any new remedy for tuberculosis and that is a very frequent occurrence to have patients claim that they are much better whenever a new line of treatment is adopted It was so with Koch, Bergeon and Edson I have tried the latter for a period of three months only to abandon it and while using it among some 150 cases of complications I had developed four marked cases of acute insanity I regret that I am forced to admit that I feel that medical science has done very little toward checking the downward career or in the diagnosis of this disease

Dr Y J Green St Paul—The full ability of medicine is best demonstrated in the treatment of tuberculosis The statistics of some of the newer remedies are very encouraging at first, but they are somewhat altered when we stop to consider how many cases of enlarged glands and tubercular laryngitis get well without any treatment. I am still inclined to t belief that we must depend more upon climate and high altitude than any thing else

Dr Joseph Muir, New York—The treatment of tuberculosis is a very vague thing We should be somewhat guarded in pronouncing a cure for the reason that many cases for a time manifest a quiescent stage which simulates cure As for the beneficial results of climate, I think more is due to the change of surroundings than to the climate

Dr Chas H Hughes, St Louis, said that one should not depend on any one remedy in the treatment of consumption

Dr Love said he knew of the work and results of Dr Paquin in his laboratory, and knew that his results in the treatment of tuberculosis were as stated

Dr Paquin, in his closing remarks, stated that serotherapy was founded on natural law It was nature's own remedy he tried to produce when he prepared tubercle antitoxin He believed that serotherapy in tubercle had passed the experimental stage, although by no means perfect He said that in the earlier stages pulmonary tuberculosis could be arrested in at least 80 per cent of the cases by the use of serum and proper adjunct treatments

Second Day

Dr Horace H Grant, of Louisville, Ky , delivered the address on surgery

THE RELATIONSHIP OF DIAGNOSIS TO THE FUTURE SURGICAL PROGRESS

He said that we must find some common ground for the settlement of our differences, many of the recent operations are passing away, owing to the effect of our modern scrutinizing investigation We forget there are men in the quiet of their laboratories doing a work which makes all our wonderful progress possible We can not progress much further in technique of operative skill Any great amount of paraphernalia suggests a lack of personal resource in the operator Almost every part and organ of the human body has been removed recently with more or less good to the patient If we would make earlier and more careful diagnosis many of the possible failures would be precluded No surgeon dare say to the patient, "If I had known yesterday, or before, so and so, the result would have been different" Rarely will we fail to secure an operation if the operator be sure of his diagnosis and demands an operation No term in all surgery is so often misapplied as conservatism No aim is dearer to the surgeon than the ways and means of relieving his patient We must not fall into the error of making one man great and another man insignificant Experience is and should be one of the greatest aids in diagnosis The skiagraph has lately come into importance in surgical work, and may be made a valuable adjunct in many instances Its recent successes are noteworthy It is yet, however, in its infancy, and is doubtless capable of still more development No one doorway can open to success in surgery The skillful and intelligent application of prompt relief added to a careful diagnosis will give us the most wonderful and satisfactory results What each one finds to do let him do it with his might

Dr E M Houghton demonstrated the action of the antitoxin on guinea pigs before the Association He called attention to the conservative view the profession had taken of the antitoxins which would have a tendency to avoid the unfortunate experience the profession had had with tuberculin The value of laboratory experiments in connection with clinic observation was emphasized by reason of our being thus enabled to obtain the exact dynamics of the flesh and blood of our patients and the advantage to be gained in varying our experiments at will In the case of diphtheria antitoxin the physiologic effect can be foretold with almost the same certainty that we can predict the formation of hydrogen when platinized zinc and hydrochloric acid are brought together The world's verdict in reference to the clinic value of the diphtheria antitoxin is expressed in the report of 615 physicians reporting to the American Pediatric Society on the use of the serum, of whom 600 are in favor of its use A similar commission appointed by the German government, came to a like conclusion, while Behring claims that after a careful estimate he thinks that 20,000 lives were saved in Germany alone by the use of the heil serum In England the results are expressed in the report of the *Lancet* Special Commission, which report That the influence exerted by the exhibition of antitoxin on diphtheria is at any rate quite as marked as that exerted by quinin in malaria Our ignorance of the true action and power of the toxins and antitoxins was emphasized The author claimed that the results obtained by Pfeiffer and his co-workers, in which he showed that if the serum obtained from the blood of an immune animal be injected into an animal infected with virulent cholera cultures the animal survives while the control animals die This result is not due to the antitoxic action of the serum but to the bactericidal substances developed when the serum is brought in contact with the living cells of the animal body If an animal be treated with large and increasing quantities of living cultures of the bacillus pyocyaneus for several months, the resulting serum will possess strong bactericidal properties but weak antitoxic properties If on the other hand the toxin is used, the resulting antitoxin will have a strong germicidal and antitoxic action This may explain why we get a more potent diphtheria antitoxin when the horse has been immunized with a diphtheria toxin than when he has been immunized

Eight guinea pigs were inoculated before the Association with diphtheritic toxin, five were then inoculated with the antitoxin and the second day saw the five in excellent condition while the other three died

The Committee on Nominations, consisting of Dr J M Mathews, Louisville, Dr I N Love, St Louis, X C Scott, Cleveland, W N Wishard, Indianapolis, J M Coulter, Chicago, W F Barclay, Pittsburg, W J Mayo, Rochester, Minn , J P Collins, Hot Springs, G Blech, Detroit, T H Manley, New York, and E W Lee, Omaha, reconsidered the nomination of secretary, and selected Dr H W Loeb

Dr Robert H Babcock, Chicago, read a paper on

A REPORT ILLUSTRATING THE VALUE OF SECONDARY PHYSICAL SIGNS IN THE DIAGNOSIS OF CARDIAC DISEASE

The author claimed that the murmurs are the least reliable signs of valvular disease and an accurate diagnosis can not be made unless the secondary signs are recognized If the heart be too weak it may be that the murmur can not be detected, or a grave defect may not be noted Secondary symptoms are a modified pulse rate, character and rhythm, leading to a congestion of the veins and internal organs In some instances there is systolic venous pulsations of the liver This is diagnostic of insufficiency even if the murmur is not audible

Dr Joseph Muir, of New York, read a paper on

REINFECTION IN CONSUMPTION

(It will be published in the Journal)

Dr J A Larrabee, Louisville—The paper of Dr Muir is unusually attractive, and reflects to us our individual experience with consumption The doctrine of re infection affords the only reasonable explanation of the recurrence of arrested tuberculosis, with which every general practitioner must be familiar The principle element in our failure to secure to the patient the advantage gained by our treatment in cases of pulmonary consumption consists in our inability to remove the patient from the surroundings in which his disease commenced The air of workshops, the carpets and drapery of the apartments, together with the illy ventilated tenements of even the well to do working people, contain abundant seed for the now more congenial soil I have always believed that if the consumptive could have in the inception of his disease the comforts and care which are drawn around him in the late stages recoveries would be far more frequent In regard to climate, I do not think that altitude or latitude are of so much importance as a sterile atmosphere to the bacilli tuberculosis Some of the saddest sights which I have witnessed in my travels both at home and abroad have been doctors' mistakes coming home in pine boxes I believe that the best place for a consumptive in the second stage of his disease, when the lung tissue is beginning to break down, is at home, no matter what or where that home may be It is a sad sight to see the suffering putting up with inconveniences and deprivations, which home alone can remove, for the questionable advantage of climate To this must be added the mental depression consequent upon absent friends and the tender touch of a loving hand Yesterday I had something to say upon lavage when the subject of gastritis was under discussion To day I simply want to change the "l" into a "g" and speak of gavage, by which I mean a systematic course of forced feeding with most nutritious food, or in a word, forced nutrition It has been sufficiently demonstrated that nutrition may be successfully forced even where there is no inclination to eat Every farmer who has stuffed turkeys in a dark cellar for thanksgiving market knows this If you can make your consumptive patient gain steadily in weight he will as certainly improve in all other respects I have sent very many consumptives to New Mexico with invariably good results, but I believe that if the United States government, as proposed, were to build a sanitarium at Las Animas or Santa Fe and fill it with consumptives, it would soon become a Lazar house of disease, notwithstanding the altitude and latitude Among many of my cases sent to this place was a young man who was fast succumbing to consumption He was a blythe and accomplished fellow, and the sole support of a widowed mother He had night sweats and copious expectoration and plenty of bacilli I sent him to Las Animas to "fence ride," herding on a ranch, he rapidly improved His clerical abilities attracted the attention of his employer, who had built a hotel, and he assumed the duties of clerk In three weeks his symptoms returned, he wrote me and I told him to get out and go "fence riding", he is still well, but would have died had he remained indoors No point is better established than that consumption is a disease of aggregation of individuals It was unknown to the nomadic tribes, and no point is more important than segregation of tuberculous subjects If I have spoken at greater length than the limit my apology is that such a paper as Dr Muir has presented should not go unnoticed, and without the compliment which it deserves

Dr HUGH T PATRICK of Chicago, read a paper with elaborate illustrations on

TRUNK ANESTHESIA IN LOCOMOTOR ATAXIA

In nearly all cases of tabes dorsalis there is a band of anesthesia about the trunk of about the level of the nipple It is early in the disease very narrow or even incomplete, or may be represented by a zone in which the localization of touch is not normally accurate The sensory blunting on the legs so frequent in tabes is generally an analgesia, the trunk anesthesia is ascending, tactile, and the pain sense may be quite normal The band of anesthesia does not correspond to the cutaneous distribution of the intercostal nerves, but to the nerve fibers arising from adjoining segments of the spinal cord In some cases there are two distinct zones of anesthesia indicating simultaneous involvement of spinal segments at some distance from each other The borders are inconstant, ordinarily retract on continued testing, and vary in position with the method of examination The same band of anesthesia may occur in syphilitic pseudo tabes as shown by an illustrative case, as far as known the only one on record The patient presented nearly all the principal symptoms of locomotor ataxia, including a wide band of trunk anesthesia, but a diagnosis of syphilis of the cord was made, and on active specific treatment he made an almost perfect recovery A zone of anesthesia much narrower than this one still exists

Dr J FRANK of Chicago, presented a paper on "A New Method of Fastening the Round Ligament in Alexander's Operation"

Dr J A ABT of Chicago, read on "The Clinic Significance of the Child's Fontanelle"

Dr W J Mayo of Rochester, Minn, read on "The Surgical Treatment of Pyloric Obstructions"

Dr THOS H MANLEY of New York read a paper on

CONDITIONS WHICH MAY SIMULATE ORGANIC OBSTRUCTION OF THE RECTUM

The obstructions in the large intestine are of two kinds, viz 1, the passive, 2, the chronic or incomplete The former are the most rare and dangerous, with few exceptions depending on hernia, paresis, or occlusion by a new growth The latter derange the general health though they seldom immediately imperil life They are essentially dependent on habit, occupation or senile changes, or occur secondarily in consequence of extrinsic influences They are more common in the female sex in consequence of difference in the anatomy and functions of neighboring organs, and may give rise to such symptoms as may lead the unwary into suspecting uterine disorders

By a methodic systematic examination of cases of intestinal obstruction we may generally be enabled to determine whether the large or small intestine is the seat of stenosis or occlusion by certain well defined symptoms and when the large intestine is the seat of the trouble, we may determine not only the area involved but likewise whether such obstruction proceeds from causes of an intrinsic origin or from pressure conveyed through the other sources

Dr I N LOVE, St Louis—The paper of the essayist is a most practical one on obstruction in the rectum which is a most serious condition It is serious if present in the male and doubly serious if present in a woman There can be no question on the part of those who have been engaged in the practice of medicine for any length of time that 90 per cent of the diseases of women are dependent on constipation These patients suffer not only from general poisoning from accumulated ptomains and auto infection, as it were, but in addition there are encroachments and misplacements of the bowels, on the pelvic organs depending upon the regular accumulation of the fecal matter which produces mechanical obstruction The average woman, be she mother or daughter, has not been sufficiently impressed of the danger of constipation We all know that the old saying the standard of comparison as it were, regarding constipation which was explained in the words 'as constipated as a school marm or an owl," was correct We have all met with women young and old, moving in respectable society, whose bowels have not moved for ten days, two or even three weeks, yet these people are surprised if dangerous diseases overcome them Fatal inflammation of the peritoneum and many other similar diseases in women are superinduced by constipation We should impress women young and old that it is not only unesthetic and unartistic, but not healthful for their bowels not to move every day Let us impress them of the fact that to overcome this condition cathartics and purgatives are objectionable, they will have removed the immediate disturbances but they produce weakness and are agents in the establishment of the constipation habit Proper diet and eating of large quantities of fruit, together with an abundance of pure water, and especially exercise, will in nearly every case relieve the trouble Let me emphasize the importance of the use of a great volume of water morning, noon and night, let us teach our patients not to drink water because they are thirsty, but for the purpose of washing out their alimentary system of sewerage The fact that the essayist has cited a case where he with difficulty removed a fecal mass with the obstetric forceps from the rectum must be accepted by us We have all had experience along that line calling for the scooping out of accumulated masses menacing the health of the individual Women are very lax of exercise, an every day necessity let us teach them that a proper open condition of the rectal canal is necessary to cleanliness, to the system, and cleanliness is next to godliness

Dr N H PIERCE of Chicago, presented a new "Submucous Linear Cauterization, a New Method for the Reduction of Hypertrophies of the Conchæ"

Dr HUGH T PATRICK of Chicago, read a paper on

ELECTRO THERAPEUTICS AND ELECTRO DIAGNOSIS SIMPLIFIED

Electro diagnosis is limited to the affirmation or denial of a lesion of the lowest neuron, that is, of a lesion of the motor cells in the spinal cord or of the nerve fibers, the peripheral nerves springing from these cells A lesion of this neuron causes reaction of degeneration and this stripped of all unnecessary technicalities may be recognized by two variations from the normal, namely A loss or very considerable diminution of the faradic contraction and the slow worm like contraction of the muscles to interruptions of the galvanic current In the electro therapeutics of organic disease of the nervous system applications of electricity to the brain may be entirely discarded as useless Electricity through the spinal cord is little better In diseases of the peripheral nerve it probably hastens recovery and that current is to be chosen which the better causes muscular contractions In functional nervous disease electricity is of more practical value than in organic affections, but it is almost impossible to determine what proportion of this good effect is due to mental impression and suggestion The galvanic current is to be chosen for facial and intercostal neuralgia, and sciatica, the faradic for lumbago, for hysteric and anesthesic paralysis and pain The galvanic for exophthalmic goitre and sometimes for neurasthenic headache and backache For facial spasm, tic douloureux, spasmodic torticollis tremor and chorea electricity is useless aside from the mental effect

Dr J A LARRABEE, Louisville—I arise, Mr President, to tender my personal thanks to Dr Patrick for his plain, succinct and truthful elucidation of the application to bodies of which we know little, of a subtle fluid of which we know less I thank him because he has made the subject of electro diagnosis and therapeutics plain to my mind, which is a difficult task Hitherto papers presented upon this subject have been chiefly interesting to their authors Dr Patrick has plainly shown us what lines are to be expected from electricity It is not surprising that electro therapeutics should afford a fruitful field for quackery and then it should be surrounded with all the mysteries of his ingenuity I will say in conclusion that I have not found any benefit from electricity in chorea, nor should I expect that any benefit should accrue if the accepted pathology of that disease obtains

Dr A J OCHSNER of Chicago, in a paper on

NERVE SUTURES AND OTHER OPERATIONS FOR INJURIES TO THE NERVES OF THE UPPER EXTREMITY

It presented the following conclusions

1 Suture every severed nerve 2 The earlier the operation the better 3 If neither sensation or motion is established within a year the nerve should be again exposed the cicatricial tissue removed and the ends again sutured 4 The ends should be clean cut, should contain neither crushed tissue nor cicatricial tissue 5 Tension must be avoided 6 The wound must heal without suppuration to secure the best results 7 Hemorrhage should be controlled perfectly to prevent intervening clot 8 Carefully prepared catgut is the best suture material 9 After suturing the ends either direct or 'a distance' it is

well to stitch a fold of fascia over the united nerve ends 10 The extremity should be placed at rest 11 The external incision should be ample

Dr H P Newman of Chicago read a paper on

WOMAN AND HER DISEASES VERSUS GYNECOLOGY

The author emphasized the following points 1 As specialists we must recognize and exercise the rising interest in a medical science which shall be preventive rather than curative 2 Our affiliation should be with the general practitioner and obstetrician rather than with the specialist in surgery, who often lacks the special training necessary to an appreciation of the many disease manifestations in woman, their etiology and prophylaxis 3 As we have long made a study of the pathology and etiology of woman's diseases and as we know that whatever may be acquired can be prevented, our specialists are best qualified to lead in the movement for the reform of all conditions detrimental to the health of modern women

Dr J H Coulter of Chicago read a paper on

TONSILLOTOMY BY CAUTERY

He gave the following conclusions 1 Do only a small amount at each heating of the electrode—work five seconds and allow the patient to rest twenty seconds 2 Burn only where you can see what you are doing 3 Use an electrode bent at right angles and having a fine point 4 Do not attempt too much at one sitting 5 A strong solution of silver nitrate is an excellent hemostatic in cases where there is slight hemorrhage 6 Be sure the electrode is thoroughly heated when you attempt to burn 7 Cut off the portion loosened at each séance, it prevents healing by its friction, and is often an annoyance to the patient 8 Do not operate if the gland be acutely inflamed 9 Always remember the normal shape of the tonsil, and that one must dissect much more deeply at its superior portion in order to get all of the pathologic tissue 10 It is sometimes best to cut from below upward while taking out the inferior portion, in this convenience should be the guide 11 By care the operation may be rendered almost if not entirely bloodless 12 The indication in all cases is *eventual* total ablation 13 Succeeding steps on the same tonsil should not be more than ten days apart 14 When hemorrhage is met with, stop the bleeding at once with the heated electrode, and apply a solution of silver nitrate 90 grains to the ounce solution or stronger 15 Try the method in suitable cases and I feel confident you will concur with me in the opinion that it possesses some advantages not found in any other

Dr G Blech of Detroit read a paper on "Kola"

Dr F F Lawrence of Columbus, Ohio, read a paper on

THE PATHOLOGY AND TREATMENT OF SUPPURATIVE SALPINGITIS

He called particular attention to the following points 1 The tubal mucosa is a true mucous membrane possessed of all the histologic elements of mucous membrane 2 The fimbriæ are prolongations of the folds of mucous membrane with a few muscular fibers beyond the end of the tube proper 3 The closure of the fimbriated extremity of the tube is effected by first, the unfolding of these plicæ and the elongation of the muscular fibers with coincident inflammatory exudate and not by adhesion of peritoneal surfaces 4 The closure of the tubal ostium results in the formation of a circumscribed abscess 5 The pathology of this circumscribed abscess is the same as that of suppuration with abscess formation in mucous membranes in other parts of the body except in the effect upon important contiguous tissues 6 Occasionally the uterine end of the tube remains patent when we have the abscess of tube communicating with uterine cavity through which it may impart, discharge its contents The treatment of the tube can not be fixed by any ironclad rule, each case must be treated as best it can by first, incision and drainage in rare cases second, the vaginal section in a few carefully selected cases, third, abdominal section in a great majority of cases, hysterectomy in those cases where we find abscess of uterine wall, tubercular deposits, fibroids or malignant disease of fundus, as hysterectomy destroys the pelvic floor, it should never be performed except when there is some tangible lesion of the uterus

Dr F B Turck, Chicago—I wish to take objection to the manner in which the speaker handled the bacteriology and pathology, in his paper, of the uterus and tubes In the first place microorganisms do not peptonize living cells It is only necrosed tissues that undergo peptonization The manner in which infection takes place is, first a *soil is found upon* the surface of the mucosa—the microorganisms may develop in a mucous bed of cellular lining upon the mucous wall As the germs grow in this rich nutrient media toxins are found which are partly taken up by the underlying gland cells A necrosis then occurs and the cells exfoliate and add to the nutrient media It is then that peptonization of the necrosed cells may occur The thinning of a tube is not due to the peptonization of its wall When inflammation of the mucous membrane of the tube occurs, the membrane first may be thickened, then fluids are formed which distend the tube or tubes, and the pressure in this manner produces a thinning of the walls

Dr H H Grant, Louisville—While I believe the position taken by the essayist is practically the one we must accept, it is not the ideal one We are often forced to accept what our judgment indicates to be a second choice There are two arguments not mentioned which, while they are in the minds of the essayist and the surgeon, are not in the minds of the general practitioner and the family, and do not assist in securing consent to operate These are First, there exists always, practically, a septic condition and often a gangrenous foreign material of a highly dangerous character Secondly, there is a large proportion of apparent recovery which are in fact but partial recovery When we can so instruct the general practitioner that he will understand the patient who lies before him has within his abdomen a virulent foreign body or pus sac, he will not hesitate to consent to and advise operation Beside this when there is impressed on the patient the danger of recurrence, even after apparent recovery, he will more likely accept the operation With respect to septic peritonitis a serious question arises Whether to operate or not is still unsettled It is humiliating to decline and often hopeless to proceed

Dr I N Love, St Louis, read a paper entitled "Water" (To be published in full in the Journal)

Dr T H Stucky, Louisville—I want to say a good word for hydrotherapy, but I would take issue with the essayist that a large quantity of water is always to be taken with meals, for example, in cases of dilated stomach I do not think it at all advisable, it also prevents thorough mastication when taken with food and thereby prevents complete salivation which would result in fermentation I also think that too little attention is paid to the subject of water in our medical colleges

Fifty seven members of the Association left in a special train for Yellowstone Park Friday evening and arrived at the Park Sunday noon They expect to return in a week

Second International Congress of Gynecology and Obstetrics

This Congress opened at Geneva September 1, with a notable gathering of specialists from every civilized country The first address was made by Bouilly of Paris, with Kelly of Baltimore and Sanger of Leipsic as "co rapporteurs," and discussion by Henrotin of Chicago, Péan, Hartmann, Richelot, Tait, Doyen, Delagenière Laroyenne, Jacobs, Delettrez, Rouffert Tournay, etc Bouilly defined as follows the indications for simple incision with drainage, through the abdominal or vaginal wall

1 An acute pelvic abscess of cellular origin, the point for the incision indicated by the projection of the collection in the abdominal wall or in the vagina 2 Primary peritoneal collections consecutive to puerperal, abortion or gonorrheal lesions, acute or subacute, or to post-operative peritoneal infection 3 Suppurated hematoceles 4 Encysted pelvic abscess in the adnexa, unilateral, with not very thick walls, easily fluctuating, and located low down on the uterus so that it can be pushed down by pressure in the hypogastric region into contact with or near, the wall of the vagina Simple incision is also especially indicated in acute suppurations of the ovaries or tubes accompanied by general serious conditions in which the extreme virulence of the pus contraindicates laparotomy or hysterectomy This method of treating pelvic suppurations gives better results and ensures recovery in far more cases than is generally realized, while if a fistula persists or the suppuration returns, it does not preclude a later vaginal hysterectomy

Laparotomy is indicated whenever there is any doubt as to the character of the lesion or whether it is uni or bi lateral The latter consideration is less important in the case of suppurations, as it rarely happens that suppuration of one side is not followed by the same condition in the other Laparotomy is also the better method for pockets located high up, when they are near the horns of the uterus and yet far enough away from it and from the vaginal cul de sac for the uterus to retain a certain independence and mobility, also when the pockets are rather abdominal than pelvic, not surrounded by thickened and indurated tissues, and when they have not produced repeated pelvi peritoneal disturbances The opening of such a pocket in the course of a vaginal hysterectomy might produce an acute peritoneal infection by infecting the surrounding intestines unprotected by any old barriers of organized adherences Aside from these two restrictions, uncertainty as to the nature of the lesion and an elevated location, vaginal hysterectomy accomplishes all that can be accomplished by laparotomy in the removal of suppurated tubes and ovaries or a small pyo salpinx It also reaches and cures lesions for which laparotomy is useless or too dangerous It is the only method which reaches purulent collections enclosed in the appendages, circumscribed by adherences or merged in the neighboring parts, and separated from the great peritoneal cavity by solid and organized tracts, actual fibrous processes which render laparotomy useless and any attempt at enucleation dangerous Hysterectomy is also the preferred method in cases of large, adherent pockets, impossible or difficult to enucleate, with or without fistulas It is also the best method to cure chronic suppurations of the peri uterine cellular tissue that have opened spontaneously and formed communications with neighboring organs In these operations the purpose is simply to evacuate, the ablation of the uterus forming an ideal means of draining through which the collections discharge and dry up To extirpate the pocket itself under these circumstances deprives the operation of all the advantages of its simplicity and benignity, and shows a misapprehension of its chief advantages In conclusion he stated that ablation of the uterus is a factor not to be neglected in the treatment of pelvic suppurations Some of the laparotomists now remove the uterus along with the adnexa as this ensures perfect drainage of such marvelous efficiency that it is probably the cause of the superior results after vaginal hysterectomy Ablation of the uterus also prevents future trouble from that organ The immediate recovery is more rapid and the after effects are better, while the genital disturbance subsequent to suppression of the menstrual function seems to be less after ablation of the uterus with the appendages, than after ablation of the latter alone Vaginal hysterectomy therefore, is the method *par excellence* for treating pelvic suppurations and laparotomy only exists on its contra indications

Sanger, on the other hand, stated that the tendency in Germany is to favor laparotomy and ligatures, and a more conservative treatment The Germans consider that it is far better to retain as much as possible of the genital organs than to extirpate them and resort later to the ingestion of ovarian tissue, etc , as a substitute for them He rejects absolutely the idea of vaginal removal of a sound uterus as a preliminary to operating upon the adnexa, and states that the radical operation is not justifiable when the abdominal end of the tube is still open, nor in light cases of purulent salpingitis abscesses of the ovaries, chronic, non purulent affections of the adnexa, nor in simple, chronic inflammations of the uterus

It is beter to have a menstruating uterus, even if it is slightly diseased, rather than none at all On the other hand, the radical operation is completely justified in serious suppurations of the adnexa, pelvic peritoneum, or connective cellular tissue, when these affections coincide with a serious affection of the uterus, which alone would justify its removal, and also when the purulent affection of the adnexa has spread to the uterus, also in cases of tuberculous affections Proximity to the menopause is an additional indication for radical treatment The objections to vaginal operations are the necessity of commencing the operation at the uterus instead of at the diseased ovaries, also the impossibilty of arresting the operation, the incompleteness of the investigation of the field of operation as other purulent collections, appendicitis, etc might exist and pass unobserved, the impossibility in certain cases of a truly radical operation, and the dangers of hemorrhages and of injury to the neighboring organs In the case of slight suppuration of the appendages, when the pockets were not opened in the course of the operation, the peritoneal cavity can be closed without danger The Germans prize highly the method of closing introduced by Kaltenbach and Olshausen, except in serious cases of radical vaginal operations When ever removal of the uterus is indicated, he considers celio salpingo oophoro subvaginal hysterectomy as the least dangerous radical operation A part of the ovaries can even be retained with it Drainage is indispensable in all cases of contamination of the hand of the operator or of an intact region with virulent pus, also when the hemostasis is not perfect or there is a discharge of virulent pus, also where there is a preexisting fistula, or perforation of the intestine during the operation He prefers Mikulicz's method of drainage, and adds that thanks to this, the life of the patient can always be guaranteed, with complete recovery in time Tamponing also relieves the anxiety of those who venture to close the abdomen He classified some of the various methods in vogue as follows

Vaginal methods 1, anterior colpo celiotomy (Duhrssen, A Martin, etc), 2, posterior colpo celiotomy (Steel, Hegar, Battey, Byford, Laroyenne, Landau, Mackenrodt, etc) 3, anterior and posterior colpo celiotomy (Bode, Von Erlach, Gottschalk), in combination with uni lateral and bi lateral salpingo oophorectomy, 4 colpo hysterectomy (Pean's uterine castration), colpo hystero salpingo oöphorectomy or radical vaginal operation (Pean, Segond, Doyen, Landau) Abdominal methods 1, celio salpingectomy and uni or bi lateral celio salpingo oophorectomy, 2, total *celio salpingo oophoro hysterectomy* (Krug, Polk, Delagenière, Schauta, Bardenheuer, etc) 3, bi lateral celio salpingo oophorectomy combined with supra vaginal hysterectomy (Zweifel, Kelly, Sanger) Mixed methods Abdomino vaginal hystero salpingo oophorectomy commencing usually with the vagina and ending with the abdomen (Landau), and finally, in a group apart, sacral or parasacral celiotomy (Hegar, Von Hochenegg, Czerny, Schede etc), which has only been performed by a few surgeons and with strict limitations

Kelly's able presentation of his methods was read by the Secretary General Henrotin (Chicago) insisted on the benefits of immediate vaginal incision with digital exploration, and if necessary a second opening in the anterior cul de sac

Richelot *(Paris) remarked that extirpation of the adnexa* through the abdomen was not always followed by recovery, and the surgeon was sometimes baffled by encountering extremely virulent pus In every second one of the laparotomies he has performed since 1894 for suppurated adnexa he has been compelled to finish with double castration Laparotomy triumphs where there are organs to be respected, which is he considers, its true indication He added that the tubes and ovaries are not heard from after the removal of the uterus as often as the uterus after the removal of the appendages concluding with the statement that vaginal hysterectomy should be accepted as the preferred method of treating pelvic suppurations, principally because it avoids the two dangers of laparotomy infection of the peritoneum and injury to the small intestine Hartmann (Paris) urged more general resort to repose in bed and vaginal antisepsis as the first and sometimes, the only treatment needed for pelvic suppurations He has also derived great benefit at times from dilatation and curettement which may prove useless, but in certain cases seem to be all that is necessary Pean lauded total vaginal castration as applicable to all pelvic suppurations of genital origin and sure to produce better results than any other method of treatment Recovery is more rapid the earlier the operation is performed, and the mortality, in skilled hands is only from 1 to 4 per cent He concluded by mentioning the beneficial results he has observed *occur in from two months to three years after the* operation disappearance of hysteria in 6 patients, of nervousness in 2, insanity 5, melancholia 1, morphinomania 2, ileo lumbar neuralgia 4, mammary and intracostal neuralgia 3, nausea and rebellious gastralgia 2, anemia from inanition 2, headaches and sweats 4, inability to walk 1, gravel and nephritic colic 1, rheumatic endocarditis 1, bronzed pigmentation 1, and albuminuria 2 Péan now has a record of 350 operations and repeats his previous announcement, that total vaginal castration requires a special set of instruments, such as he has been using since 1883

The other subjects discussed at the Congress were "Surgical Treatment of Retro deviations of the Uterus," presented by Kustner, Polk and Pozzi, and the discussion led by Martin Bouilly, Lawson Tait, Doyen, Jacobs, Edebohls (N Y) Gill Wylie, Delettrez, Stapfer and Petit, "Best Method of Closing the Abdomen," presented by Granville, Bantock and La Torre, discussion led by Martin, Tait Richelot Laroyenne Doyen, Jacobs, Edebohls, Gill Wylie, Byford (Chicago) and Delettrez and 'Relative Frequency and Shape of Abnormally Small Pelvis in Different Countries," etc , which were represented by Fancourt Barnes, Dohrn, Fochier, Kufferath, Lusk, Rein, Pawlick, Pestalozzi, Treub and Barry Hart

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Fourth International Congress of Criminal Anthropology

This interesting assemblage of the specialists who are fostering this infant science opened at Geneva August 24 Lombroso said in the course of his address, in regard to our prisons that as at present conducted the expenses have to be borne by the law abiding citizens and they fail to reform the criminal The probation system with work in mines, penal farms, etc should take the place of our present prisons and criminals from passion and political *criminals* should not be imprisoned at all as exile alone is more than sufficient punishment. Confirmed criminals, epileptics, alcoholics should receive special medical treatment, but the *efforts of society should be espe* cially directed to bringing up in a moral atmosphere the born "criminaloids" from the earliest months of their lives, with absolutely no intercourse with depraved associates and no opportunity for them to corrupt decent young people. With this should be combined every possible means to combat alcoholism, social, religious, with journals, pamphlets, etc., and constant medical supervision of the "criminaloids." Francotte spoke of a condition induced by alcohol which he calls alcoholic somnambulism. The individual acts in an apparently normal manner, but has no consciousness of his actions, or at least retains no remembrance of them. He considers it a legally irresponsible condition, except in cases of premeditated intoxication. Legrain's address was an appeal that the importance of alcoholism as an evil and peril to the nation should be inculcated in every way, taught in the schools and impressed upon legislators as their guiding principle. Habitual drunkards should be incarcerated, so that they could not propagate their kind, and compulsory cures legally enforced. Their children should be taken from them and societies formed for this purpose. Garofalo suggested that criminals should be classified as follows: 1, assassins, 2, violent, 3, dishonest, 4, cynics. Homicidal mania, pyromania and epilepsy would be included in the first category, hysteria and kleptomania in the third and sadism in the fourth. If penal science were relieved of some of the conventionalities which now encumber it, and the actual criminals separated from the mere revolts and disobediences, each type of criminal could then receive appropriate treatment and the science be established on a firm basis. Malarewski stated that the establishment of medico-pedagogic institutions and agricultural training colonies is the only means to reclaim children with a predisposition to degenerates, and that an international medico-pedagogic congress is the only means to accomplish the organization of such colonies. Other subjects presented were the influence of the press on criminality, anarchism from the point of view of criminal anthropology, or as Zakrewski prefers to call it, legal psychopathology, digital imprints and Bertillon's discussion of the gaps still to be filled in anthropometry. The members from Russia, Italy and Belgium were especially prominent in the Congress.—*Gaz. Méd. de Liège*, September 3.

SELECTIONS

The Progress of Scientific Medicine and Pharmacy in China, A Conversation with the Physicians of Li Hung Chang.—With the great Chinese warrior and statesman who has just honored our country with a brief visit, there came two attachés of the Chinese Imperial Medical Service, Drs. Irwin and Mark, for the purpose of insuring his health and physical comfort during his journey around the world. It has been the pleasant privilege of the writer to call upon these custodians of the bodily welfare of the Viceroy, and to talk with them in regard to the recent progress of western medical methods in the Celestial Empire.

Dr. George Mark's manner is most cordial and in every way pleasing; his English is so thoroughly excellent, that only his physiognomy and dress betray his nationality. He is in the foremost rank of the Chinese students of scientific medicine.

Dr. Andrew Irwin, an examiner and director of the Imperial Hospital at Tien Tsin, is a genial Briton, who has come to favor and position among scientific men who are struggling to supplant the barbarous myths and superstitious practices of the Chinese physicians by the more human and more scientific methods of our western civilization. He appreciates the need of a change of this sort and the value of the progress already made, and finds pleasure in making known the condition of his favorite science in the country that has become the scene of his life work.

When the first medical missionary arrived in China in 1834, he found the medical methods of the country in a most deplorable condition. There was a scanty medical literature, of which one of the most important works was the Materia Medica of Li Shi Chan, which is known as the Pun Ts'o Kong Muk. Its first edition of forty volumes appeared near the close of the sixteenth century; the last of the four reprints was issued in 1826. This materia medica was a most inclusive one and it necessarily included many useful substances, as is shown by the following quotation: "Whatsoever things are produced in the world—birds, beasts, creeping things and fishes, which are generated and have blood and breath; like wise flowers and trees, which are generated, but are without blood and breath; and also inanimate objects, such as rocks and hard iron—all of these can be used as healing medicines." There had been a so-called Imperial Medical College in Pekin since the thirteenth century, but it imparted no regular courses of instruction, rarely conferred degrees, and the skill and learning of the members of its faculty were reserved for the requirements of the royal family and the members of the court.

The native practitioners were divided into three great classes: 1, the class of specialists, of which there was a subclass for nearly every division of the human body; 2, a class whose attention was given solely to diseases of the internal organs; 3, a class that treated only external diseases. A case is often cited to illustrate this condition of affairs of which it is related that a man wounded by an arrow was first visited by a physician for surface maladies. He broke off the shaft of the arrow at the surface of the body and told the patient that further treatment must be had at the hands of a physician skilled in the diseases of the internal organs.

Acupuncture and cautery by the moxa were much in vogue; counter irritation was practiced by vigorously pinching the skin with the fingers, or by harshly scraping it with a stick dipped in water or oil, and by use of various plasters. The Chinese were pioneers in the art of massage, a rude form of it forming a part of the regular operations of the native barber-shops. Surgery was almost unknown and its advance has been very greatly hindered by the belief that for well being in a future state, the body must be kept intact; hence, we hear of the pulverizing and swallowing of extracted teeth, of the eating of an excised part, or of its preservation for burial with the body after death. The medicines used were notoriously inert in many cases, and were often most disgusting in the method of their preparation or in their origin. The right to professional rank had been passed from father to son as property is inherited. In the case of a break in the line of succession, the professional privileges were sold along with the estate. Almost no study was necessary to inspire the patients with awe and faith, if the right to practice had been obtained by either purchase or inheritance from a family having a reputable ancestry of noted physicians. It has been said that "Were all of the native practitioners in the empire at once swept away, the Chinese people, so far as their prospects of health and longevity are concerned, would sustain no very serious loss."

During the last half century, the labors of the medical missionaries and other physicians from America and Europe, have done much to relieve the immediate sufferings of the people and have worked a very marked change in the practice of the native physicians in the more accessible parts of the empire. Between fifty and one hundred hospitals have been established by the efforts of various denominational organizations, and more than two hundred medical missionaries have taken part in the work, including more than a score of women. Many Chinese men and women have been trained for physicians and nurses in the hospitals, or in private study with the physicians. An association was formed in 1887, called the Medical Missionary Association of China, of which the official organ is the *China Medical Missionary Journal*, at present edited by S. R. Hodge, of Hankow, and published quarterly at Shanghai by the American Presbyterian Mission Press. Many medical works and treatises on the allied sciences have been translated into the Chinese language. Dr. John G. Kerr, an American medical missionary who went to Canton in 1854, has been especially active in this work, having issued more than twenty-five medical text books in the Chinese language. Fryer has translated the chemic treatises of Bloxam and Roscoe, and also several books on physics, botany, materia medica, etc.

The late Dr Osgood, an American medical missionary, issued a Chinese edition of Gray's "Anatomy", Hunter has translated Squire's "Companion to the British Pharmacopeia" Martin, Smith, Allen and the Chinese physician Suvoong, are to be included among the names of those who have made contributions to the literature available for Chinese medical students who read only their native language

More than one hundred American and European physicians not connected with the missions, have taken up their residence in China, and are engaged in private practice A Hong Kong Medical Society has been formed by the physicians of that city, a volume of their transactions was published in 1889 Dr Irwin mentioned Drs Manson and Canthe, since retired, as among the most prominent of the founders of this society Each of the ports open to foreign commerce has a "Surgeon to the Customs" In 1870 the Inspector General of Customs issued a request for a semi annual report from these medical officers of the different ports in regard to the condition of the health of foreigners and citizens in their respective provinces, together with the results of studies of new diseases or of diseases rarely met outside of China These reports are published annually under the title "China Imperial Maritime Customs, Medical Reports".

Dr Irwin described the founding and success of the Imperial Medical College of Tien Tsin, in connection with the Yang Ping Yuen (Imperial Hospital of the North), with great pride and feeling The first class was examined for graduation in 1883 Of the eighteen candidates for diplomas, twelve passed Dr George Mark, of the Viceroy's party, was at the head of his class, of which another member is now in America for the completion of his medical education The school was not reopened until November, 1893 There are now twenty six students enrolled, eleven in the second year class and fifteen just beginning The course of study requires four years for its completion There is no separate school of pharmacy, but the students of the medical school are given instruction in the preparation of medicines The school and hospital are both in charge of Dr Houston, an European There are four regular lecturers, one European and three Chinese The medical officers of the Navy often lecture also, when their vessels are stationed conveniently The hospital has sixty five beds and is taxed to its utmost capacity There is also a hospital for women, having thirty one beds, which is in the charge of Mrs Dr Howard King, formerly of Philadelphia

Dr Kin Ta Chin, a member of the class of 1883 of the Imperial Medical College, has been decorated for his services as commander of the field corps of the Imperial Medical Service during the recent war with Japan, and is now in charge of the field hospital of the army of North China at Kin Chou

Dr Irwin spoke in most complimentary terms of the assistance rendered by the surgeons of our navy during the Japanese war Especial mention was made of the work of Dr Philip Leech at the Isabella Fisher Hospital, which is superintended by an American woman, Dr Rachel Benn, and also, of the valuable services of Dr Ames, who has been consulted by the Viceroy, and who ably assisted at Che Foo in caring for the wounded from Port Arthur and from the naval engagement of Yaloo

"We place no reliance on the medicines of local manufacture" said the doctor in reply to a query, "but use only those imported from Europe and America Many of the large manufacturers and dealers have branches or agencies in the Empire The government contracts for drugs and medicines are a small matter in time of peace, five hundred gold dollars would cover the whole bill for one year"

There are drug stores kept by foreigners of different nationalities, and quinin and some other foreign drug staples are found on the shelves of the natives shopkeepers

A number of American and English dentists have established offices in the larger cities but very little advance has been made among the native workers Chinese dentistry is crude and a fakir's art Mercurial preparations are used for loosening the diseased tooth, when it is extracted by means of a string or rude forceps—often with a sleight of hand accompaniment to prove to the patient that the trouble in the aching tooth is due to a worm A worm is smuggled into the patient's mouth during the operation, again removed and exultingly exhibited Artificial teeth are made from bone and fastened in the mouth by attaching them to the sound teeth with a wire or a string

Now that the government has evidenced its appreciation of modern scientific medical methods by establishing and maintaining a school in which they may be taught to the youth of the land, and men from all parts of the empire have had occasion to either experience or witness their success and benefits during the recent war, we may safely regard this as the era of the triumph of science in China—we may hope that the day is not far distant when plasters of powdered tiger's teeth have lost their repute as remedies for the healing of external injuries, when jelly prepared from bear's paws has lost its alterative power, when potions made from the horn of the hart are no longer used for the renewal of wasted vitality, when Chinese mothers can eat chickens, ducks or turtles without fear of destroying the hearing or eye sight to their unborn babes, or can look upon a hare or rabbit with no qualm over a possible harelip for the unborn one —E E Ewell in *Pharmaceutical Era*, September 10

A Case of "Sadism," or Sexual Perversion with Violent Tendency —Dr Morton Prince, in *Boston Medical and Surgical Journal*, reports a case of this nature in a male aged 22 years By "Sadism" is meant the association of cruelty or violence with lust, the name being derived from the notorious Marquis de Sade, whose obscene novels treated of lust and cruelty

Dr Prince's patient before coming under his observation had been regarded as being the subject of neurasthenia or hysteria His relatives made a diagnosis of general laziness, while others described him as being not quite right His mental state was unknown to others until, after great difficulty, Dr Prince obtained a full confession It was his custom to lie upon the bed in the daytime and fall into a sort of trance or day dream state, in which he was apparently between waking and sleeping He said he thought he was awake, because if anyone should knock on the door or come into the room he would know it While in this state he used to imagine that he killed and mutilated women It was not possible to learn from him the exact mode in which this habit began, or what was the original exciting occasion, but his imagination began in a moderate way and afterward extended At first, it was only a single woman whom he imagined he thus mutilated, but afterward in each "seance" he destroyed great numbers His imagination seems to have created actual hallucinations, for he said that at these times he actually saw his victims with great vividness as objective realities and had the sensations of actually killing them, for the time being his acts were absolutely real to him, and soon a belief in them persisted

At first it was a single girl whom he mutilated, he killed her, tore her to pieces and ate her, later he imagined that he lived in towns where it was the custom for the men to destroy all the women in this way Then, as the habit grew, the towns became cities and the cities countries These countries were completely depopulated of the women by the men, all of whom together held these Sadistic feasts

While indulging in these dreams or hallucinations, he had most intense sexual excitement with emissions His habit was thus a form of masturbation, the peculiarity being the association of sexual feeling with hallucinations of cruelty When in the waking state he seemed to be at times confused as to whether he actually committed these imaginary murders or not, for while at one time he said he had not, at other times there was sufficient confusion in his mind to make him think that he had committed these unpardonable sins and to be in great misery in consequence, he would then be in a state of great penitence, which was not understood by his mother until this confession was obtained He also admitted to me that at times he thought he had actually committed these acts He had practiced this habit from the time he was 10 years old until about 20, that, is up to about two or three years ago During the last two years this habit had largely died out, but there has been (September, 1895) a tendency to recurrence It was apparent that such a person was dangerous to the community and that at any time there was a possibility, under favorable conditions, that he might put what had hitherto been pure imagination into actual practice, we therefore sent him to an asylum without delay He denied that in mutilating the bodies of his victims that he selected any particular parts of the body, as is the case with many Sadists

His general condition was one of neurasthenia He had much depression and suffered from great anguish of mind from which he broke down and cried at times, saying that he "suffered intensely," but could not describe very definitely from what particular feeling, it seemed to be more an anguish of mind

His heredity is bad, and throws light upon the distinctively degenerate character of his mental condition His mother was excessively neurasthenic One maternal aunt was described as nervous, with abnormally fixed ideas on certain social subjects, and two maternal aunts suffered from hysteria A maternal brother was delicate and always on the point of breaking down His maternal grandfather was a very able and physically strong man, with decided elements of genius He is well known to the public and recognized to be very brilliant mentally, but a man of very extreme opinions Up to the age of 40 he had a tendency to melancholia The maternal grandmother was neuralgic, ailing, neurasthenic The patient's father was eccentric and a dipsomaniac One paternal aunt was well, a second was described as having a bad temper and at one time as having had delirium (about this my notes are confused) A third had hysteria Two cousins, sons of the second paternal aunt, both drank to excess The first paternal aunt had four children, of these, one had a sort of puerperal insanity, from which she recovered Two paternal uncles are said to have of dissipation

The early history of this patient is interesting, as showing the progressive physical descent (*facilis descensus averni*) of such a case Since 2 years of age always more or less out of order, 5 years of age, attacks of nausea, vomiting and headache with fever, delirium alternating with coma, these attacks were followed by excessive weakness, slow recovery from weakness which persisted until the next attack, which occurred at the end of about one month, he lost flesh and his temper became irritable, so that he became violently excited and enraged over little things

Several eminent physicians of New York were consulted One said that he was unable to make a diagnosis A second said it was brain disease, and a third said it was lithemia from the liver Accordingly he was treated for this last with calomel, with the apparent results that after this he had no more attacks but only premonitory signs, which were always stopped by calomel

This perversion of the sexual instinct is the exciting motive of many notorious murders The Whitechapel murderer was undoubtedly the subject of Sadism Similar instances are well known and may be found described in the literature The subject is an important one from a medico legal point of view, as well as of psychologic interest, and it is desirable that the motives leading to crimes of this kind should be thoroughly recognized Lust murders, not murders for the purpose of concealing or committing rape, but violence and murder for the purpose of inducing sexual excitement in the murderer, are probably more common than is generally supposed The sexually exciting element in such cases is the sight or smell of blood, or the cutting, tearing or mutilation of the victim's flesh Verzeni found, as he confessed, unspeakable delight in strangling women, experiencing during the act erections and real sexual pleasure Some find delight in actually eating the flesh or drinking the blood (Leger, Verzeni) Sometimes special pleasure is found in cutting or tearing out the uterus, ovaries and genitalia, which are carried away (Whitechapel murderer), but this is not always the case, and the victims are not mutilated in this respect

A similar perversion is found in the excitement which some have in harmlessly cutting, beating or whipping women and boys A case has been brought to my attention of a man who was in the habit of visiting a prostitute whom he used to strike over the nates with a shingle No coitus was indulged in

PRACTICAL NOTES

Early Symptoms of Diabetes—Unschuld calls attention to an early symptom of diabetes which is seldom mentioned by writers on the subject, but which is yet frequently found, and may assist in an early diagnosis of the affection This symptom consists in cramps in the calves of the legs, and is found in about 26 per cent of all cases The pains occur with especial frequency in the morning upon waking, and occasionally also during the night They are rarely troublesome in the daytime, unless after a nap or a bath Cramps of this nature, occurring in a person in feeble health, should always suggest the necessity of an examination for sugar —*Health*, September 11

Changes in Urine from Medicine—Oleoresins and balsams (copaiba, sandal oil, turpentine and its derivatives) taken as medicines often give a yellowish zone at the circle of contact between the nitric acid and the urine in the cold test for albumin From a ring of albumin, however, this cloud can be easily distinguished by its solubility in alcohol Concerning the test for glucose, many organic medicaments (chloral, chloroform, turpentine, glycerin, salicylic acid, etc) give rise to urinary ingredients which reduce copper solutions to a less or greater degree on prolonged boiling The phenylhydrazin hydrochlorate test will differentiate all these reagents from dextrose Sulphur (or albumin which contains it) gives a black precipitate with Boettger's bismuth test for glucose, and hence must be excluded as a factor if this method be used —*Ed Denver Med Times*, September

Hemol Bromid—The *Medical News*, August 29, quoting Dr Kobert in the *Therapeutishe Wochenschrift*, states that that observer has been seeking to obviate the unpleasant after effects of the inorganic bromids and to that end has "been making trial of an organic bromid which has no injurious effect upon either the blood or digestion It contains only 2 7 per cent of bromin, as against 67 per cent which bromid of potassium contains But only a small portion of the bromin contained in the latter salt exerts any action in the body Holst used bromid of hemol in fifty cases of nervous disease If a rapid effect was looked for, two grams (thirty grains) were given three times a day One half or one third of this dose was employed for a calming effect In epilepsy and hysteria, he obtained no good results where the inorganic bromids have shown themselves efficacious In insomnia, the results were equal to sodium bromid, without any unpleasant sequelæ The conclusion is that bromid of hemol is not capable of replacing inorganic bromids where a rapid effect is desired It is indicated, however, in cases where the sedative and long continued action of bromin is sought for"

Diagnostic Value of Percussion of the Vertebral Column.—Bechterew calls attention to the importance of the results attained by percussion of the sacral region of the spinal cord. He has derived great benefit from it in obscure cases, and urges its general adoption. He describes one traumatic case with symptoms of compression of the cauda equina, plantar, genital and perineal anesthesia, spontaneous pains in the joints, pain on percussion of the sacral region, disturbances in the sphincters, etc., with fever. Percussion of the triangle, whose base corresponds to the upper part of the sacrum and the point to the coccyx, produces in normal conditions a slightly tympanitic resonance. In this case there was a distinctly limited dullness and an operation confirmed exactly the diagnosis as to the seat of the lesion. Caries was disclosed in the serum with a fungus mass compressing the cauda equina.—*Gaz. degli Osp. e delle Clin.*, August 4.

Mechanical Treatment of Sciatic Neuralgia.—Negro of Turin, has cured or materially improved 100 out of 113 severe cases of sciatic neuralgia that had resisted all other treatment, by compressing the nerve. The patient lies flat on his face, the lower limbs touching and stretching to their fullest extent, and the point is found by palpation where the sciatic nerve emerges from the ischiatic notch, which is usually the most painful spot. The right thumb is then pressed on the nerve, reinforced by the left thumb, and the strongest pressure possible exerted for fifteen to twenty seconds, turning the thumb so as to distribute the pressure laterally over as much surface as possible without removing the thumbs. This process is repeated after a minute's rest several times, the pain growing less each time. Five or six of these treatments on successive days produce good results.—*Memorabilien*, August 5.

Formic Aldehyde as a Disinfectant, and Method of Application.—At a meeting of the Maine State Board of Health, Professor Robinson reported that the tests of formic aldehyde which had been made had given very encouraging results. He exhibited to the board the workings of a lamp which he had constructed for its application. The lamp consists of a cylinder into which wood alcohol is continuously fed from a tank similar to that of a German student's lamp. In the top of the cylinder is fitted a diaphragm of copper gauze consisting of two layers, between which is a layer of especial material. Upon the application of gentle heat to the gauze the alcohol below begins to vaporize and change into formic aldehyde, a gas having the germicidal properties of sulphurous acid gas, but in a greater degree. The vaporization progresses as long as alcohol is supplied. Professor Robinson detailed experiments which had been made at the Bowdoin laboratories upon pure cultures of disease germs and upon infected bedding and clothing, by which the germs were quickly killed. Subsequent cultures made from infected articles were found, after exposure of the fabrics to the fumes from the lamp, to have been absolutely sterilized. About a pint of the alcohol, vaporized, would supplant the atmosphere in a room of 3,000 cubic feet.—*Sanitarian*, September.

The Hypnotic Potency of Trional.—In an article which appeared in the *Wiener Medicinische Presse* for April 1 and 8, 1896, and is summarized in the *Wiener Klinische Rundschau* for June 21, Dr. Richard Drews, of Hamburg, remarks upon the frequency with which the physician finds it his chief task to secure for the patient a few hours of quiet sleep, so that he may not only be freed from distress for the time being, but supplied with fresh endurance to battle with the disease. For this purpose a hypnotic is required that is easily taken, that promptly induces restful, dreamless, normal sleep, from which the patient awakes refreshed and strengthened, that is harmless and as free as possible from unpleasant collateral and remote effects, that does not beget a habit, and that can be taken for a long time.

Judging of trional from its action in thirty cases, Dr. Drews thinks it such an ideal hypnotic. Nineteen of the patients were adults and eleven were children. The causes of sleeplessness in the adults were neurasthenia once, hysteria twice, a phlegmon of the hand once, articular rheumatism twice, muscular rheumatism once, sciatica three times, prurigo once, trigeminal neuralgia once, a scald of the foot once, intercostal neuralgia twice, cancer of the uterus once, and pulmonary and laryngeal tuberculosis with severe paroxysms of coughing and profuse sweating at night three times. In the children there were otitis media three times, meningitis with convulsions once, chorea once, night terrors twice, epilepsy once, pneumonia with severe agitation once, and furuncle of the ear once. For the adults, the dose ranged from fifteen to twenty-two grains; for the children, from three to twelve grains, according to the age. It was administered in strict accordance with Goldmann's directions. The adults took it in bed in a cup of hot milk and then drank another cup of milk; the children took it in their evening broth or in a cup of hot tea. In cases accompanied by severe pain twenty-two grains were always given to the adults instead of fifteen grains. In twenty-eight of the cases the result was invariably a restful, calm, natural sleep, coming on in the course of fifteen or twenty minutes, and on the following morning the patients felt refreshed and as well as the nature of the disease admitted of. In two of the cases, that of phlegmon of the hand and that of cancer of the uterus, the hypnotic action was delayed for an hour or an hour and a half, and did *not last for from* six to eight hours, as in the others, but only for three or four hours. Both these patients were sleepy the next morning and complained of oppression in the head, of headache, and of weakness, and the one with uterine cancer suffered also with ringing in the ears and with nausea. These phenomena occurred for several days after each administration of trional, but strict questioning brought out the fact that it had not been taken in the precise manner prescribed.

Treatment of Ozena with the Antidiphtherial Serum.—Drs. Bellfanti and Della Vedova are quoted in the *Medical Week*, May 1, as follows: Bacteriologic examinations made by the authors led to the conclusion that ozena is caused by a microorganism identical in form and cultural peculiarities with Loffler diphtheria bacillus, though differing from it in diminished virulence. The organism was not only found upon the surface but also in the depth of the nasal mucous membrane. According to the authors, it causes the chemic alterations of the secretion, the fetid odor, and the atrophy of the mucous membrane and of the bones. These results led them to undertake the treatment of ozena with diphtheria antitoxin. The results obtained were most remarkable, for of thirty-two patients sixteen were wholly cured, seven almost healed, five rapidly improved, and in only four was improvement slow. Ten c.c. of diphtheria antitoxin was injected every second day or, when possible, every day. The number of injections varied according to the age of the individual, the length of time the disease had existed, and the degree of local and general reaction. On an average 30 c.c. were required to effect a cure. At first the injections caused congestion of the nasal mucous membrane. Soon thereafter the fetid odor disappears, the secretions become liquid, and the formation of crusts ceases permanently. The accidents which compel suspension of the treatment are the same as those observed in the treatment of diphtheria and are without danger.

Report of the Employment of the Toxins of Erysipelas upon Malignant Tumors.—In the *Annals of Surgery* for July is given the minutes of a recent meeting of the New York Surgical Society, a part of which refers to the above subject. At that meeting Dr. L. A. Stimson, Dr. A. G. Gerster and Dr. B. F. Curtis submitted the following report upon the use of toxins in the treatment of malignant disease: "Both before and since our appointment as a committee we have been able to observe, individually and together, a considerable number of cases treated by this means, and in no case have we found any amelioration which held out a prospect of ultimate cure We have, on the contrary, observed in some cases that the rate of growth of the disease was much more rapid during the treatment The treatment also imposes a very severe tax upon the strength of the patient, and apparently hastens the cachexia in most cases We believe that in the instances of apparent cure or marked improvement the correctness of diagnosis is open to doubt We therefore submit 1 That the danger to the patient from this treatment is great 2 Moreover, that the alleged successes are so few and doubtful in character that the most that can be fairly alleged for the present treatment by toxins is that it may offer a very slight chance of amelioration 3 That valuable time has often been lost in operable cases by postponing operation for the sake of giving the method of treatment a trial 4 Finally, and most important, that if the method is to be resorted to at all, it should be confined to the absolutely inoperable cases "

Echinococcus in the Liver Cured by Bacelli's Method —The *Annali di Med Navale*, No 7, describes the case of a sailor brought to the hospital with severe pains in the right flank, fever, dyspnea, insomnia, greatly hypertrophied liver and evidences of a hepatic tumor An exploratory puncture confirmed the diagnosis of echinococcus, as hooks were discovered in the limpid liquid withdrawn, which contained no albumin and very little glucose, but chlorid of sodium in abundance The only question then was whether it was a unilocular or multilocular cyst In the latter case the tumor is usually solid, painful on pressure and knobby, with hypertrophied spleen and a purulent or serous effusion in the peritoneal cavity, with pronounced icterus and intestinal hemorrhages These symptoms were absent in this case and the diagnosis of a unilocular cyst was confirmed by the recovery of the patient Thirty grams of Van Swieten's solution were injected with a Kurschmann syringe and 700 grams of liquid withdrawn The fever ceased the fourth day after this injection Two liters were afterward withdrawn with a Potain needle, which completely emptied the cyst Appetite and sleep returned and the general health slowly improved, the liver subsided to its normal size and the heart and spleen returned to their normal position, but six months passed before the recovery could be considered complete —*Gaz d O e d C* , August 23

Straightening the Spine by Wiring the Spinous Processes Together —Chipault's new method of treating caries of the spine is described in the *Therap Woch* , No 35 The spine is straightened and held in this position by wires that fasten the spinous processes together, so that the orthopedic appliances do not have to contend with the constant tendency to curvature After chloroform the patient is placed on his belly, three quarters pronation, the back turned to the operator A longitudinal opening is then made along the spinous processes, two to three vertebræ above and below the limits of the curvature Without touching the interspinous ligaments both sides of the processes are exposed and the soft parts drawn aside, the assistant at each end then pulls the spine to straighten it as much as possible, and a silver wire is passed through the interspinous ligament above the highest process to be ligated at the bottom near the root The wire is then cut, leaving on each side a piece twice as long as the wound The ligating is done with these two ends, crossing them back and forth and passing them through each interspinous ligament from the highest process downward until the lowest is reached, when the two crossed ends are twisted together The wires must be passed through the ligaments close to the lower edge of the process above to afford as firm a support as possible Each crossing must be tested to see if it is strong and taut before proceeding to the next The soft parts are then sutured without drainage, bandaged and the patient is placed in bed The two difficulties, lateral curvature of the spine and anchylosis of adjoining processes, are met by boring a hole in the processes in the latter case, and in the former by extending the end of the wire on the convex side up to the loop at the top and stretching it tight, which straightens also the lateral curve In cases of lumbar or dorsal caries, the bandage can be changed in five to six days and in cervical caries in ten, and the stitches removed from the soft parts This ligature of the spinous processes is undoubtedly an advance in the treatment of Pott's disease, but it only applies to moderate curvatures of recent origin, that have commenced suddenly and developed rapidly and are capable of reduction in anesthesia, and to weak spines It is not adapted to old curvatures or those involving too many of the vertebræ The presence of an unopened cold abscess or of paralysis is no obstacle Absolute immobilization should follow the operation

Arsenic in Scarlet Fever —A Russian physician, Speransky, announces that he treated a large family of children with arsenic as a preventive measure, when one was attacked with fatal scarlet fever and isolation was impossible Although they slept with the sick one, none of the rest took the disease except the oldest, 18 years, to whom the arsenic had not been administered and the youngest, who had been neglected and had only received occasional doses, with none at all for several days before the disease appeared The arsenic was administered in Fowler's solution, half a drop at each of the two principal meals (8 and 9 years) with half this amount at 3 years When the 3 year old child was taken with the disease he received half a drop three times a day, with powders of phenacetin and terpin hydrate, the 18 year old four drops with the powders The arsenic attenuated the disease in a remarkable manner after it had developed, with no fever after the first day and the child so well that it was impossible to keep it in bed The other cases treated outside showed the same results, a striking improvement in the course of the disease after the first day, with complete recovery in a week The preventive doses were continued for six weeks —*Semaine Médicale*, August 26

Hydatic Cysts of the Liver —Bobroff injects salt solution into the cyst pocket after he has emptied it, to prevent the liquids from the neighboring organs finding their way into it and recommends this process to others In a recent case, after removal of the hyatid and cleansing of the pocket with gauze, he excised a piece 12 centimeters long and injected 250 grams of the salt solution The inverse edges of the pocket were then closed with a double row of sutures and the abdomen closed completely The wounds healed by first intention with only a slight rise in the temperature one day, and the patient left the hospital entirely cured in a month —*Union Méd* , August 15

Hot Water Vaginal Injections —In the treatment of female pelvic diseases by hot water injections Dr J H Burtenshaw gives the following rules for method of application 1 Use a large sized fountain syringe, preferably one holding four quarts, attached to a support three or four feet above the body 2 Always lie upon the back with the hips slightly elevated and the shoulders depressed 3 Use at least three gallons of water as hot as can be borne—*at a temperature of from* 110 to 115 degrees Fahrenheit 4 Take the injection twice daily, morning and evening, except on the two days preceding and the two days following the menstrual flow In cases of chronic leucorrheal discharge in which additional astringent elements, to the douche, are indicated, he adds a tablespoonful of the following mixture to the last quart of water Pulv alum, zinci sulphatis, sodii biboratis, ac carbolici, aa ʒi , aquæ, ʒvj —*N Y Polyclinic*, September

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SATURDAY, OCTOBER 3, 1896

THE MURDER OF THE INNOCENTS

The incidence of mortality in the first years of life is a well-known showing of all tables of vital statistics, but its preventable factors are not so clearly recognized, while far behind lags the resolution to make theoretic knowledge a realized fact Talk as we may about the disadvantages of "grandmotherly government" and "socialistic legislation," no one can affirm that in matters of preventive medicine and hygiene there can be too much governmental oversight The wisdom and morality of the few must become that of the many, and it can only become so by stringently penal legislation and executive control Human nature is at least not yet sufficiently ethical to be allowed indiscriminate and unscrutinized control over the young life that comes to it

Take the matter of child life insurance as an example Is it not evident that parents too poor to bury a child should be held too poor to pay premiums on the insurance of the child's life? And yet this is the excuse constantly made by parents, either sincerely or deceitfully, to justify the custom What a clear temptation to murder[1]

The English medical journals, especially the *Lancet*, have in late years been active in showing up the prevalence of this abuse in England, where it is undoubtedly of greater extent than with us From an editorial in the *Lancet* in 1895 (1 p 428) we learn that of 4,629 children recently subjected to cruel treatment 1,237 were insured Another editorial in the *Lancet* (1895, 1, p 166) on infant neglect, insurance and mortality, among other things says An unfortunate infant, whose death was recently investigated by the coronor for the West Middlesex district, might have been saved by medical aid (which might have been had for a mere pittance), but the parents claimed they were unable to pay a physician anything, yet the insurance premium on the child had been promptly paid up to its death Facts like these sicken the public conscience The *Lancet* calls for drastic reforms, and says the insurance should only be for an amount of the bare cost of the funeral arrangements (which is very cheap in England compared to our funeral rates, we believe) The same editorial urges that evidence of criminal neglect or mismanagement should disqualify parents even for the small sum insured This seems to us very clever, as it shifts the burden and expense of proof on the interested corporation, who would likely be more rigorous in their search for evidence exempting them from payment of the policy than the municipal authorities, ordinarily interested parties

In May, 1895, SIR RICHARD WEBSTER read in the House of Commons a bill providing for the maintenance and encouragement of the mutual benefit principle in such insurance, limiting the sum insured to an average almost as low as that of the friendly societies, £2 ($10) up to 10 years of age This bill also entails upon physicians the duty of inquiring as to the fact of insurance before granting a certificate of death, and a like service is required of the register It allows a child to remain under the protection of this act until 16 years of age The *Lancet* says 'We are aware of no present limitation except the inability to pay the premium, and the average of £4 ($20) and a maximum of more than twice this sum is not uncommon, while payment in some clubs may be made partly in spirits It is significant also that wilful neglect of infants, *according to a recent return*, has been shown to be much more common under the non-mutual *system" (that is, those clubs not organized by workmen for their mutual benefit)* We know nothing relative to the ultimate disposition of this act, and are not aware of any legislation in Great Britain limiting infant insurance According to the *British Medical Journal* (1895, 1, p 291), the reports of the Select Committees on Friendly Societies, 187[illegible] and 1888, contain a large amount of information upon this subject

FRANCIS VACHER (*Lancet*, 1895 1, p 251) suggests that legislation should prohibit all private corporations or individuals from insuring infants' lives, and that the government be empowered to enter into [illegible] will to insure any child free of cost, on p premium at the nearest post office, thus reducing cost of insurance and bringing it directly under the law. Such a measure we do not think necessary or wise, and for us it is, of course, out of the question.

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[1] In the *Lancet* of April 20 1895 a member of the Massachusetts Society for the Prevention of Cruelty to Children said she found families in which children were deprived of the most ordinary necessities of life while money for the insurance of the dying child was put aside Several other similar instances equally pitiful are given The cost of infant burial is within the reach of thrifty people, and for the rest, in all countries the community is bound to bury when others can not

As to our own country, affairs are in a chaotic state. In 1895 a bill was reported to the Massachusetts legislature providing that no life insurance company shall issue a policy upon the life of any child under 10 years of age, living in that State. The penalty was fixed at $100 for each offence, the law to come into force September 1, 1895. Whether the law ever came to vote or not (probably not in these days of "politics") we do not know, nor whether other States have attempted similar regulation. Medical men in charge of the medical departments of life insurance companies should bestir themselves, both as officers and members of society, to bring about judicious and and needed legislative reform.

Another cause of infant mortality is overlying. It will doubtless surprise even physicians to learn that one thousand children are each year killed in London alone by this careless (or perhaps often intended and criminal) custom. Yet such is the estimate of a London coroner. From an editorial in the *British Medical Journal* (1895, i, 36), we excerpt:

> There are sad sides to a Merry Christmas, and not the least sad of these this year has been the sacrifice of infant life from overlying. On December 27, 1894, Mr Braxton Hicks held five inquests on the bodies of children who had died while sleeping with their parents, the cause of death in the majority of cases being suffocation. The coroner said he could not persuade parents to get cots for their children, and that a thousand infants were overlain in London alone every year. The matter is extremely serious. Perfectly healthy children are sacrificed to the bad habit of making them sleep with their parents. It is perhaps difficult to draw the line and to separate thoughtlessness from carelessness so gross as to be criminal, but Liverpool statistics showing the enormous frequency of deaths from overlying on Saturday night points to the fact that the carelessness is gross, and that unless drink be accepted as a general excuse for crime, the action is in a large proportion of cases criminal. Mr Braxton Hicks announced that he would make it a rule in all future inquests of this character to disallow the expenses of the parents, a course which he adopted in each of the five cases before him. The fight against preventable diseases is hard enough, but it seems harder still to prevent the effects of carelessness and folly.

Of infanticide, every physician is well aware that neither the ancients nor present day savages have a monopoly of the practice. In every city there are men either with or without a medical degree who make a profitable business by murder, through abortion. There are many reasons why these criminals can not be brought within the reach of the law, the principal of course being the inability to secure evidence against them. Their "patients" will not tell, but the evidences of their work are well known to every gynecologist. One thing is, above all things, certain. There should be compulsory inspection and registration of all "stillborn" infants. Braxton Hicks (*British Medical Journal*, 1895, ii, p. 1540) relates an instance illustrative of the ease in which a child may be killed and falsely registered stillborn. The child, plainly a viable one, after being smothered was boldly thrown out into the middle of the road to rot. We would urge upon our general medical associations and societies the duty of promoting such badly needed legislation. They might also profitably institute investigation and control of the disgustingly much-advertised lying-in institutions where "for a consideration," infants after delivery are "supplied with homes."

Undoubtedly it is a difficult matter to educate the community in the care of children and in the value of child-life. The law and a sensitive conscience are agreed that murder of an unborn fetus is as much murder as of one born, and that infant murder is as much murder as is adult murder, but ordinarily the lower classes make an unconscious sliding-scale of criminality increasing in approximation to real murder of the adult, and beginning with conception, when and shortly after, "getting rid of it" is by no means sinful. Against such a tendency in the interest of civilization and ethics we must all protest with what power we may. But the efficacy of our protest will depend upon the numbers that speak, the publicity of the protest, and the effectualizing of it in legislative enactment.

CELEBRATION OF THE INTRODUCTION OF ANESTHETICS

October 17, 1846 a venous tumor of the jaw was removed by Dr Warren without pain, the patient being placed under ether by Wm T G Morton, a Boston dentist, and the next day a fatty tumor was removed, and in a few days, after the performance of some minor operations, Dr Hayward, in the presence of Dr H J Bigelow and others, amputated the thigh of one Alice Mohan, Morton, as before, administering the ether.[1] "From this date," says Lyman, "the success of anesthesia was placed beyond all doubt. The great discovery was immediately heralded throughout the civilized world, and was everywhere adopted with the utmost enthusiasm."

To properly celebrate the semi-centennial of this great discovery, the Massachusetts General Hospital have issued an invitation to a limited number of guests to participate in the ceremonies. We print elsewhere a reduced fac-simile of the card of invitation. It will be noted that nothing in the invitation can be construed into an assertion of priority of use, for the medical public are now well aware that sulphuric ether had been used by inhalation for dentistry and minor surgery by W E Clarke and Crawford W Long, but it was reserved for the Massachusetts General Hospital to have the first capital operation, and to make the world hear. She can then with all propriety and conscious pride celebrate the semi-centennial of

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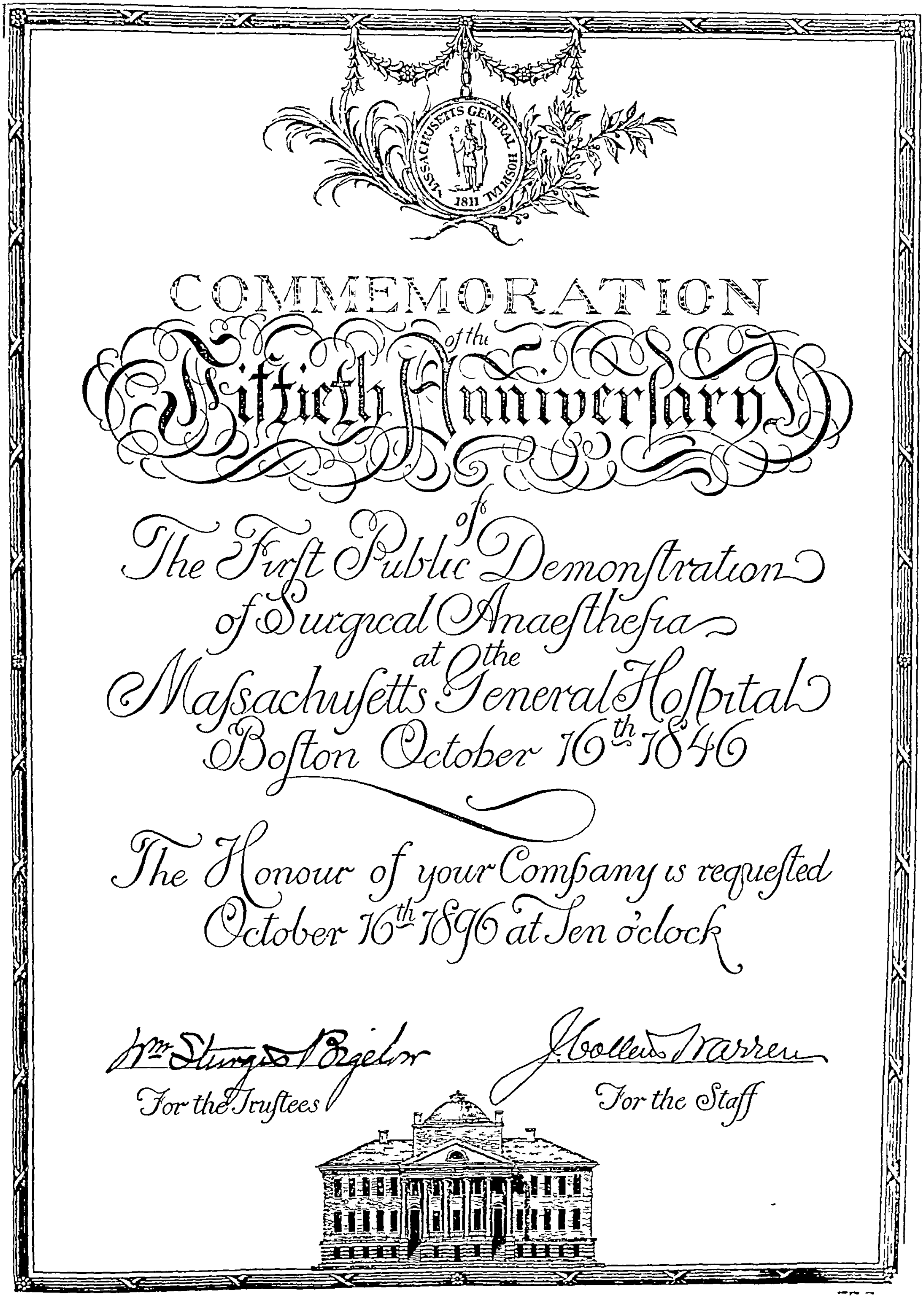
[1] See Bigelow on "*Discovery of Anæsthesia*" in Century of American Medicine, Philadelphia, 1876, and Lyman on "Artificial Anæsthesia," New York, 1881.



COMMEMORATION
of the
Fiftieth Anniverſary
of
The Firſt Public Demonſtration
of Surgical Anaeſtheſia
at the
Maſſachuſetts General Hoſpital
Boſton October 16th 1846

The Honour of your Company is requeſted
October 16th 1896 at Ten o'clock

Wm Sturgis Bigelow
For the Truſtees

J. Collins Warren
For the Staff

an event that connects her name indissolubly with the greatest boon that has yet been vouchsafed to man

The notable gathering that will be present October 16 in that now famous amphitheater may be warm in their praises and oratory will no doubt be all that the occasion demands, but the larger amphitheater of the world, so far as inhabited by civilized man, will contain thousands of sympathizers with this movement whose sympathy, unwritten and unspoken though it be, will be as sincere and earnest as any May prosperity continue to attend the Massachusetts General Hospital and its staff

PROPOSED LEGISLATION IN REGARD TO EXPERT TESTIMONY

The unsatisfactory conditions that exist in regard to medical expert testimony, have been the subject of a vast amount of earnest thought and their discussion has occupied no inconsiderable space in medical literature but as yet the questions that have been raised seem very far from a satisfactory settlement That they are living questions of the day is sufficiently demonstrated by the contents of the last issue of the Journal, which contained three valuable communications by leading men in our profession together with the equally able discussion that they incited The views there enunciated are certainly worthy of respect and careful consideration, but as the discussion shows, the solutions offered of the actual difficulties are not in all ways acceptable Reform of abuses in medical expert testimony as they exist in our present methods of judicial inquiry is most desirable, but no one seems to have yet discovered the universally applicable cure for these evils

The favorite remedy just now appears to be that embodied in the different legislative proposals that have been put before the law-makers of the three States of New York, Illinois and Minnesota, viz , the appointment of a commission of experts by the judge or judges, either in each particular case or for a given period for all cases This would undoubtedly improve matters, but is open to some very obvious objections One of these is stated by Dr Suiter, the law could not deprive the defendant of his right to call in additional evidence outside of the appointed experts and, if he had accepted these, it might put him in the position of combatting his own witnesses Besides this objection which would occur to a lawyer, there are others equally apparent to a layman or a physician The mere fact stated above that the defendant, say in a criminal case, can not be bound to confine his expert witnesses to the list approved by the judges, leaves open the possibility of nearly or quite all the abuses now complained of His witnesses may be qualified or not, they may be pretentious quacks or they may outweigh as experts all the official appointees There is no assurance that judge-appointed experts will always be really such, judges are fallible, and, as regards medical matters, often ignorant men, they may be influenced by prejudice, friendship, or partisanship, and in the present state of medical practice with the numerous schools not discriminatingly estimated by the laity, the very desire to avoid partisanship might cause a non-medical man or a body of such, to make injudicious or improper selections An official position also, involving public consideration and compensation will be sought after by the unworthy, and too often, it may be, with success

Allowing, however, for these imperfections, such an enactment as that pending in New York State would still do away with many of the objectionable conditions that now exist, and might well be welcomed It creates no real standard, however, for an expert, and in this is its failure The importance of this defect may be variously estimated, but in some respects it is a vital one, and how to avoid it is still a problem for consideration Some provision in the law that no one shall be considered an expert and have his testimony received as such unless he can show that he has had actual experience in and has devoted a certain number of years to the study of the subjects in which he claims to be specially skilled, would perhaps best meet the requirements, and this could be brought in as a part of a bill fixing the minimum compensation for expert testimony by the State This last, in view of some recent judicial utterances, would be an eminently desirable measure as making the State recognize the difference between the giving of opinions which are the expert's stock in trade and ordinary testimony With such a provision in the law, also, we would not have the scandal of specialists in one department testifying as experts in another, a practice which has been unfortunately, to say the least, sometimes indulged in by men of reputation and ability, and otherwise unexceptionable medical practices A jury of laymen is not likely to make distinctions between one man of reputation and another, and the law should not allow them to be misled in this regard by a lawyer's trick, even if men can be found willing to be his instruments At present experts are allowed to estimate themselves and the result is often disastrous to them and to the general standing of expert testimony

Medical expert testimony has probably suffered more from the present defects in the court practice than any other kind, and it is full time for the profession to exert itself in behalf of reform if only for the sake of its own reputation, which continually suffers under the present order of things

"The Atlanta Clinic", Change of Management —With the September issue of that journal, the editor, Dr Edward C Davis, and business manager, Dr W L Champion, retire from control This step has been taken on account of the increased professional business preventing the proper attention to the details of the journalistic work They will be succeeded by Dr Lucien Lofton as editor and Mr Ephraim Smith business manager

CORRESPONDENCE

The Spanish Language and the P -A M Congress

NEW YORK, Sept 23, 1896

To the Editor —Several physicians who think of attending the Second Pan American Medical Congress, to be held in the city of Mexico, if they could secure the services of a well known Spanish speaking physician to act as their guide and general translator, have asked me whether I am willing to go with them in that capacity I replied that I have no objections, but in order that the number of physicians composing the party be still larger will you be so kind as to say a few words about this matter in the JOURNAL?

There are no doubt a large number of professional gentlemen who would willingly go to Mexico, taking advantage of the reduction of the price of the trip for that occasion, if they could find some confrère thoroughly qualified to act as their *cicerone* I remain sincerely yours,

DR A M FERNANDEZ YBARRA

235 Thompson Street

Straw Charcoal with Boric Acid as an Antiseptic

VALLEY CITY, N D , Sept 23, 1896

To the Editor —It may interest some of the JOURNAL readers to know that a mixture composed of one part, by weight, of muslin sifted straw charcoal to two parts of powdered boric acid will heal old ulcers or wounds very rapidly , fresh cut or torn surfaces are healed as if by magic This may be old to many of the profession, but I never heard of it until I used it But even if old it may do no harm to remind all that it is a very valuable combination Fraternally

F H DEVAUX, M D

SOCIETY NEWS

The Central Medical Society of New York —This Society will meet at Rochester, N Y , October 20 Sixteen central counties of the State are represented in the membership of this society, which meets annually, alternating between Buffalo, Syracuse and Rochester

The American Academy of Railway Surgeons —This society, after a very interesting and instructive meeting at Chicago, closed its third annual session September 25 Chicago was chosen as the meeting place for next year The following officers were elected President, L E Lemen, Denver , vice presidents, M C M Gardner of San Francisco, R Ortega of Diaz, Mexico , secretary, D C Bryant, Omaha , treasurer, C B Kibler, Corry, Pa , editor, R Harvey Reed, Columbus, Ohio

Canadian Medical Association —This association has elected the following officers for 1896 97 President, V H Moore, Brockville, Ont , vice presidents For Prince Edward Island, Peter Conroy, Charlottetown , Nova Scotia, J F Black Halifax, New Brunswick, Thos Walker, St John , Quebec, J M Beausoleil, Montreal , Ontario, W W Dickson, Pembroke , Manitoba, R S Thornton, Deloraine , North West Territory, E H C Rouleau, Calgary , British Columbia, E B C Hannington, Victoria , general secretary, F N G Starr, Toronto , treasurer, H B Small, Ottawa The place of meeting in 1897 will be Montreal, in conjunction with meeting of the British Medical Association

The Autopsical Society of Paris —This twenty year old Society, known as La Société d'Autopsie Mutuelle, has grown so rapidly in membership that it now numbers about one hundred Fellows They are nearly all, says the *Medico Surgical Bulletin*, scientists of note, several of whom are women It has for its purpose the placing of the brains of its members at the disposal of surviving members for examination and dissection Fourteen brains, neatly catalogued, are now contained in a glass case at the end of the meeting room, and the fifteenth, which was during life the property of M Abel Havelacque, rector of the Anthropologic Society, now rests immersed in alcohol on the table of the dissecting room, where the man's former associates will meet to weigh, probe, cut and discuss it

Association of Erie Railway Surgeons —The annual meeting was held at Lakewood September 21 An accident occurred at the opening of the session which interfered with the pleasure of the gathering Dr John L Eddy, of Olean, the president of the association, a well known surgeon, stepped into an open elevator shaft and fell to the bottom, a distance of eight feet He was at once removed to his room, where it was found that he had sustained a deep cut across the forehead, a badly sprained ankle and a severely bruised hip On account of this accident to the president, the vice president, Dr Webb J Kelly of Galion, Ohio, presided Dr S Birdsall of Susquehanna, Pa , presented a paper on "Symes ankle joint amputations ," Dr F W Thomas of Marion, Ohio, "Injuries of the throat" , Dr C C Kinnaman of Ashland, Ohio, "Symmetrical gangrene" , Dr C M Daniels of Buffalo, chief surgeon of the Erie Railway, told about his relief and hospital organization scheme, as intended to be adopted by the company Other papers were "Traumatic spinal neurosis," by Dr N R Harnden of Waverly, N Y , "Painful stumps after amputation," by Dr C B Kibler of Corry, Pa , "Railway shock," by Floyd S Crego, of Buffalo , "Clinic review of cases the past year" by Dr Thomas Manley of New York The annual election of officers resulted as follows President, Dr Webb J Kelly, Galion, Ohio , vice president, Dr F W Thomas, Marion, Ohio , secretary and treasurer, Dr W W Appley of Cohocton, N Y

Tri State Medical Society of Alabama, Georgia and Tennessee — The eighth annual meeting will be held in Chattanooga, Oct 13 15, 1896 The following partial list of papers indicates that the session will be of more than usual interest

Convulsions in children treated with large doses of morphin Y L Abernathy, Hill City, Tenn

The therapy of antipyretics P L Brouillette, Huntsville, Ala

Cystitis , report of cases D S Middleton, Rising Fawn, Ga

A new splint for fractures below the surgical neck G A Baxter, Chattanooga

Humphrey's operation (amputation of the penis) with presentation of patient Cooper Holtzclaw, Chattanooga

Diseases of the veru montanum (caput gallinaginis) W Frank Glenn, Nashville

Acute pelvic congestion Valentine Taliaferro, Atlanta

Operations for abscess of the liver W C Townes, Chattanooga

Treatment of pus in the pelvis W E B Davis, Birmingham

Some remarks on syphilis W F Westmoreland, Atlanta

Observations on the treatment of specific and non specific venereal ulcers Wm S Goldsmith, Atlanta

Bacteriologic data in the drainage of the peritoneal cavity George S Brown, Birmingham

A statistical report of some of the more recent remedies used in the treatment of tuberculosis, and summary of recent preventive methods of value R. H Hayes, Union Springs, Ala

The Turkish bath , its therapeutic indications Louise Eleanor Smith, Chattanooga

Microscopic and chemic aids to diagnosis Katherine R Collins, Atlanta

Vaginal hysterectomy for bilateral suppurative processes of the uterine adnexa W D Haggard, Jr , Nashville

Some obstetric complications with report of cases R R Kime, Atlanta

Puerperal eclampsia Searle Harris, Union Springs, Ala

Puerperal eclampsia J E George, Rockwood, Tenn

Medicine , Hippocratic and operatic John P Stewart, Attalla, Ala

Diseases and treatment of the accessory sinuses of the nose B F Travis Chattanooga

Report of a case of bradycardia W C Bilbro, Murfreesboro

Paper on diseases of the eye J M **Crawford,** Atlanta

Paper on diseases of the eye Alec Sterling, Atlanta
The Woodbridge treatment of typhoid fever J W Duncan, Atlanta
Treatment of cancer of the skin C R Achison, Nashville
President's address, the Doctor of Medicine J B Murfree, Murfreesboro, Tenn

College of Physicians of Philadelphia—SECTION ON OPHTHALMOLOGY —A meeting of the section was held March 17, 1896, Dr Wm F Norris, chairman, presiding

Dr George C Harlan exhibited a case of traumatic enophthalmia in a boy 5 years old, who five months previously was wounded by the horn of a bull The right cheek and temple and the lower eyelid were lacerated, and the inferior margin of the orbit was chipped There was complete ptosis At the time of examination the tendo oculi was found to have been torn away and the lower lid was dragged downward and outward by the action of the orbicularis and the contraction of the cicatrix The surgeon who attended the patient at the time of the accident reported that there was considerable orbital cellulitis with abundant discharge of pus from between the lids, but there never was exophthalmia He thought that the cellulitis was confined to the lower part of the orbit At present the eyeball is retracted and has the appearance of being very much smaller than its fellow The cornea is situated five millimeters behind the plane of that of the other eye There is scarcely more ptosis than would result from the depression and loss of support of the lid When the patient looks directly forward the palpebral fissure is five or six millimeters wide He insists that he sees well with the eye Though the movements of the eyeball are much restricted no diplopia can be detected There is complete inability to look upward beyond the horizontal line either directly or to the right or left Horizontal movements are normal and the downward excursion is much exaggerated

Dr Charles A Oliver gave the clinical history of a case of ciliary staphyloma and excavation of the optic disc following traumatic cataract in a boy 4 years old The clinical picture of this case of complicated secondary glaucoma was complete Unlike similar cases of sudden obstruction to proper lymph stream circulation, there remained from the very first, as shown by the fields of vision, and as afterward proven ophthalmoscopically, an element that may possibly complicate many more cases of the traumatic type of this disease than is at present imagined, and that is retinal detachment Again, the condition of the vitreous and its peculiarity of opacities, taken in connection with the history of the case, would tend to show that there was a hemorrhage into that humor which probably might have been recognized ophthalmoscopically had the patient been seen a week earlier These, with a few certain evidences of a low grade iridocyclitis, made the case still more atypical On the other hand, the progressive diminution of the field of vision, the gradual distension of the globe and the localized tissue bulgings in the upper ciliary regions, the deep and characteristic cupping of the nerve head, the reapproximation of the remaining areas of retinal detachment, and the late, fixedly increased intraocular tension all show the certainty of degeneration even in a young and yielding eyeball when such tissues are subjected to a persisting increased intraocular pressure The case illustrates the results of two conflicting contemporaneous conditions produced by traumatism localized inflammatory reaction and obstruction of lymph stream circulation

Dr George E de Schweinitz presented a "Further note on an unusual form of macular lesion following iritis" The patient, a woman 50 years old, recovered with a nearly normal sharpness of vision, but with some vitreous opacities from a violent attack of serous iritis The eye remained comfortable for eight months, when she appeared with a positive scotoma and the ability to see to count fingers only when situated in the periphery of the visual field In addition to the positive scotoma which the patient described as appearing "like a dinner plate with a green edge," there was a small absolute scotoma about the horizontal level Ophthalmoscopic examination revealed an oval reddish area, giving the impression of a disintegrating hemorrhage and containing in the center several white dots situated exactly in the center of the macular region Dr de Schweinitz referred to the unusually distinct macular ring which seemed to indicate that there must be some thickening in the periphery of the hemorrhagic area

Dr Oliver exhibited a water color sketch of a case of unusual submacular hemorrhage forming a part of some very curious lymph extravasations in the retina without any vitreous disturbances, found in the left eye of a healthy woman 65 years old, from whose eye he had successfully removed a black cataract by simple extraction about two months previously

Dr de Schweinitz gave the clinic history of a patient suffering from convergent strabismus of the left eye and a very high myopia 16 D Ophthalmoscopically, the following lesions were presented A small posterior polar cataract, numerous fine vitreous opacities, and a horizontally oval optic disc, of a greenish gray color The nerve head was imbedded in the center of a huge mass of opaque fibers which followed the course of the principal vessels almost to the periphery of the eye ground, in all directions, but less markedly downward and to the nasal side A small patch in the macular region was not covered by the opaque fibers, but was disturbed by superficial choroidal changes There was almost complete loss of nasal field, and of the entire center of the visual field, with exception of a small area to the nasal side of fixation, about 10 degrees in diameter, within which the white test object was dimly seen Colors were correctly appreciated when held in the temporal field

In the discussion, Dr B Alexander Randall showed a card-specimen of a case of retained nerve sheaths in a case that had been sent to him for supposed intracranial disturbances In this case there was an isolated patch situated in the macular region Dr Oliver exhibited the drawing of a case in which the medullation began at the edge of the disc and divided into two comet like processes extending along the lines of the larger retinal vessels

Dr James Thorington, by invitation, exhibited an asbestos cover chimney with disc attachment for ophthalmoscopic purposes The original form with the disc attachment he had made two years previously The present arrangement showed that five changes could be made in the disc 1 The one centimeter opening fulfilled all the purposes of the original chimney 2 The two centimeter opening permitted greater freedom of movement on the part of the observer, without moving the light 3 The three centimeter opening may be used as a source of light for the concave skiascope, or for the ophthalmoscope, otoscope, etc 4 A round section of cobalt blue glass for the chromatic aberration test of ametropia had been added, as likewise 5 The perforated disc with perforations and spaces each 1 45 millimeter to test for astigmatism at one meter's distance

Dr Thorington showed a new form of perimetric lenses which received its name from the fact that their optical center corresponds to the points of fixation in the fields of vision The reasons given for the recommendation of the lens, were, that it gives to the eye that form of lens which is consistent with a normal form of the visual field, it removes the edge of the lens to a sufficient distance so that the edge can not be seen to any great degree while the eye is fixed straight ahead, and that bifocal segments can be made much larger He stated that the increase in weight need rarely exceed the ordinary form, twenty five to thirty grains, the large size does not attract much attention, and the cost will remain the same as in the ordinary styles used Upon account of necessary greater weight and thickness, he believed that this form of lens can not be used for cases of aphakia and high myopia, but showed that as this class of cases constitutes much less than one half of all refraction cases (37 per cent), the lens will be accepted in the majority of instances

Dr Oliver exhibited and demonstrated a series of microscopic specimens showing the various forms of eyes seen in fish, reptiles, birds, quadrupeds, and man He showed the marked differences in the conditions of the dioptric media, the varying shapes of the eye ball, the relative positions of the eye in the head of the animal, the adaptations for near and for far focusing the arrangements for increase of the interior illumination, the positions and peculiarities of the nerve structure, and the relationship existing intra cranially between the two organs, in the aquatic, the terrestrial and the aerial forms of animal life

PUBLIC HEALTH

California's Mortality Report for August—Reports from fifty cities, towns, villages and sanitary districts, aggregating a population of 739,132, show a mortality of 865—a death rate of 1 17 per thousand for August, 1896, or 14 04 per 1,000 per annum

Isolation of Lepers in Russia—A "leprosorium" has just been completed at Wenden, and Virchow congratulating the Society for the Prevention of Leprosy during his recent visit to Russia, remarked that they had accomplished in this isolation of the lepers more than the most powerful of the popes had been able to effect in the days of their greatest supremacy

Horse meat Consumption in Paris—There are at least two hundred horse butcher shops in Paris The first one dates from July 1, 1866, since when the consumption has grown continuously In 1872, 5,034 horses were eaten in Paris, in 1878, 10,000, in 1894, 21,227, in 1895, more than 30,000

Mortality Report of Connecticut for August—There were 1,644 deaths reported during the month of August This was 33 more than in July, and 293 more than the average number of deaths in August for the five years preceding the present The death rate was 23 6 for the large towns for the small towns 21 6 and for the whole State 23

Typhoid Fever in the Navy—Surgeon C A Siegfried, of the battleship *Massachusetts*, reports that on August 31 he was compelled to transfer from the vessel to the Brooklyn Naval Hospital the fifth case of typhoid fever that had occurred aboard since she was commissioned at League Island in June last The surgeon is reported as saying that he attributes the disease to the bad drainage of Philadelphia, and the condition of that part of the city nearest League Island

Quarantine Station for Northern New Jersey—Dr A H Doty, Health Officer of the Port of New York, has applied, through Dr H C Herold, the Health Officer of Newark, to Governor Griggs of New Jersey, for the establishment of a quarantine station at Perth Amboy While all vessels that come to New York are obliged to stop at the boarding station of the quarantine office on Staten Island, they can land at Perth Amboy without interference, and there is therefore danger of contagious disease being spread from that point Governor Griggs, it is reported, will recommend such a health station in his next annual message to the Legislature In the meanwhile he has promised to use a $10,000 emergency fund which is at his disposal for the suppression of any outbreak of disease, should the occasion arise

A Society for the Prevention of Noise—The formation of such a society is suggested in the *North American Review* by Dr J H Girdner He contends that there is as rightful need for such a society as for the Society for the Prevention of Cruelty to Children It is, indeed, for the prevention of cruelty to grown people The continued concussion of noise on the auditory nerve is injurious to the whole nervous system, and is a great contributing element to the nervous prostration so common among city dwellers It is a well known fact that one coming from the country is almost stupefied by the multitude of sounds in a great city The city man is used to it, but it is at the expense of vital force, and he undergoes, unconsciously a strain that is great and wearing Dr Girdner's view is that a man has as much right to legal protection against an assault on his auditory nerves by useless noises as he has against an assault on his nerves of touch, by being whipped or beaten in any way

Improvements at the New York Quarantine—Dr A H Doty health officer of the port of New York, is commended by the *Medical News*, August 29, for the great degree of efficiency that has signalized his tenure of office One of his innovations is the wearing of a uniform by himself and his deputies when they are "on duty" The uniform is a badge of authority especially impressive, normally so we might say upon the foreign element that visit these shores for the first time New headquarters are in course of construction, a part of which will be devoted to a bacteriologic laboratory This laboratory is already fully equipped and ready at a moment's notice to undertake the diagnostic confirmation of suspicious cases, so that a few hours of delay, while the investigation is being made, enables the health officer to determine on a scientific basis, whether a ship must be detained at quarantine or be allowed to proceed "This fact is not usually appreciated by the general public, and the solution of this question of delay by the present health officer certainly reflects the greatest credit upon him If a ship arrives after sundown, instead of being obliged to lie at anchor for the night in the lower bay, she is inspected at once and allowed, if in a suitable condition, to proceed to her berth If there are immigrants or others requiring individual inspection, an electric search light is set up upon the deck, and under its powerful beams the inspection is satisfactorily accomplished If the passengers or cargo require disinfection, the boat, which the health officer has just had constructed, will accomplish it *tuto, cito et jucunde* A row of bathrooms on either side of the boat will quickly disinfect eight persons by spray or vapor, or both Clothing, bedding, etc , is all disinfected by steam, *in vacuo*, in a great car, such as is in use by the city Board of Health The cargo itself is disinfected by sulphur gas, which is carried from the disinfecting boat in pipes under pressure, and distributed where needed, as water is distributed with hose Thus, a ship, her cargo and her crew, coming from an infected port could, in a few hours, be sent into the harbor with a clean bill of health, the safety of the public being assured and the rights of the shipping master protected as well Surely this is a prodigious advance over old methods Should a ship come to our shores, containing many cases of infectious disease—cholera, for example—there would be no long and vexatious detention of the well and clean, together with the sick The former, after disinfection, would go on their way, and for the latter the health officer has provided large and commodious barges anchored near the quarantine islands, isolation being thus complete and the conditions as favorable as possible for recovery It is to be hoped that this system may not require the severe test of experience, but if it should we see no reason to doubt its efficiency If successful, it would redound primarily to the great credit and praise of the present health officer it would also be a demonstration to the public that its safety in sanitary matters depends largely upon the endorsement and support of the medical profession "

Typhoid Fever at Albany, N Y—The *Bulletin* of the North Carolina Board of Health, August, gives a resume of some recent studies on the s[illegible] Good [illegible] The writer takes for an object [illegible] stat[illegible] that

Albany, N Y, a city whose water supply is taken from the contaminated Hudson River He quotes the statements of Professor Mason of the neighbouring city, Troy, to show the economy that might be exercised by officials in curtailing the expense account inevitably incident by that water borne zymotic disease, typhoid fever What is the tax levied annually by that fever upon a city of 100,000, for instance Albany, N Y From statistics given in the five last annual reports of the State Board of Health, the deaths due to typhoid fever in Albany average 75 for the year Rating the money value of each life at $2,000 this death rate would mean an annual pecuniary loss to the city of $150,000 Funeral expenses are variously estimated at from $20 to $30 Should we accept the intermediate value of $25, this item would cause $1,875 to be added to the above sum, thus raising the total direct loss through death to $151,875 But typhoid fever does not always kill, its mortality rate is commonly quoted at about 10 per cent For the present purposes should we assume nine recoveries for each death from the disease, and place forty three days as the period of convalescence (the average of 500 cases at the Pennsylvania Hospital), we should have a term of 29,025 days as representing the time lost, per year, by the 675 persons who have the fever and recover Thus an annual loss of over seventy nine years has to be borne by the city's capital of productive labor This great amount of enforced idleness, when translated into money value, should very properly be added to the death loss above estimated Fixing the rate of wages at $1 per individual per day, a very low figure, considering that the bulk of typhoid patients are in the very prime of life, there is a loss of $43 for wages for each recovery, or a total yearly loss for the city from this item of $29,025 The cost of nursing and doctors' bills equals at least $25 per case, which is a very low estimate, thus adding the further amount of $16,875 to the gross sum Expressed in tabular form, this yearly tax imposed by typhoid fever in Albany is given and, upon a most conservative estimate, it is practically $200,000, which is $2 a year for each man, woman and child in the city, or a yearly tax of $10 for every family of five persons 75 deaths at $2,000 each, $150,000, 75 funerals at $25 each, $1,875, wages of 675 convalescents, during 43 days, at $1 per day, $29,025, nursing and doctors' bills for 675 convalescents, at $25 each case, $16,875, total tax levied annually by typhoid fever upon the city of Albany, $197,775 It can readily be seen that public works which could eliminate a reasonable fraction of this great tax would pay for themselves in the course of a few years, even though they were originally expensive Finally, it is right to inquire what fraction of the present typhoid loss it would be reasonable to hope to save if pure water should be served in the city in place of its present polluted supply To answer this question, recourse must be had to statistics obtained from other cities, covering periods before and after better water systems had been introduced Such data have been already given for a number of cities and communities, and it only remains to anticipate what will be later said of Munich, and state that improved water and sewerage have reduced the annual typhoid mortality from an average of 25 4 per 100,000 to 2 7 Surely pure water pays in a city with such a record, and likewise it would pay in the newer but growing cities on this side of the Atlantic Americans insist upon being supplied with much more water per capita than is usually furnished for Europe, but they are singularly indifferent as to its quality It would be a reform of great moment if they could be induced to curtail the present enormous waste of public water, such as that of Buffalo, for instance, which is stated to be 70 per cent of the entire pumpage, and to spend the money thus permitted to leak away in a vigorous effort to improve the quality of the water No such lowering of the typhoid death rate as occurred in Munich, San Remo and sundry other places, could be looked for, perhaps, but a large percentage of the present rate could be cut off, and we think, from a consideration of the above figures, that such a reduction would pay No weight should be attached to the argument, so often advanced by the individual householder, that he and his family have used the water without evil results for the past fifty years A single family is too small a collection of units upon which to base any estimate touching the question at issue Placing the typhoid death rate for Albany, as above, at 75 annually, it would call for one death in a family of five persons every 261 years, a period much beyond the limit of ordinary family record "

Vaccination in London Neglected, the Gloucester Epidemic Stamped Out —From the parliamentary intelligence reported in the London *Lancet* of August 22, we learn that in Gloucester, during the thirty weeks ending July 25, there were notified 2,008 cases of smallpox That journal further states that "Gloucester seems to have got rid of the disease and to be able to chronicle a clean sheet so far as smallpox is concerned, after suffering 2,000 attacks within a period of about ten months The bitter lesson taught by this epidemic is not likely apparently to stem the tide of opposition to vaccination wherever antivaccinationists congregate Proof of this has been seen quite recently in the parish of Islington, in the different attitude of the vestry, who, as a health body, are desirous of seeing the vaccination acts enforced, and of the so called vaccination authority, to wit, the poor law guardians, who are wilfully ignoring the voice of the vestry, not only so, but the guardians also decline to hear what the public sanitary officers of the parish have to say on the health side of the question The only consolation to be derived is to suppose that the reign of the poor law administrators is probably short lived now, and the sooner the bodies charged with safeguarding the public health have a voice in the matter the better will it be for all concerned " In another paragraph the same journal makes the following reference to to the closing up of the epidemic at Gloucester, and to the expenses borne by its citizens on account of that epidemic "The Gloucester sanitary committee have, it appears, discontinued the issue of weekly statements as to smallpox occurrences, the health of the city being deemed to approximate now to its normal condition It would seem that the expenses connected with the recent epidemic, so far as the guardians are concerned, have been about $10,280, and that it has been decided to ask the local government board to sanction the raising of a loan to meet the case It will be interesting to know what is the sum total to which the citizens will have to subscribe in respect of the epidemic in all its bearings The expenses appearing on the books of the town council will, however, we imagine, go but a very little way toward the whole, as the amount of money which must of necessity have been expended in one way and another by the public in matters of a personal character but having direct relation with the prevalence of smallpox in the town, must have been excessive We know that charitable contributions were made with a liberal hand "

A Less Stringent Quarantine for Diphtheria —The *Archives of Pediatrics*, in an editorial paragraph, commends the considerate courage of the New York City Board of Health in adopting a change, not of the highest moment but of importance as indicating a spirit of concession The regulations have been by some considered unduly harsh and arbitrary and as trenching upon the patient's personal liberty It further says

"There was a growing tendency to postpone the sending of cultures through the fear that patients who might suffer from very mild attacks of diphtheria might be made prisoners for days or weeks after every symptom of disease had disappeared That experience is not a pleasant one to the family physician It was questioned whether the board of health was warranted in depriving citizens of their liberty unless they were able to say that the bacilli discovered in the throat, weeks after an attack of diphtheria, were virulent It seemed doubtful to many men of large experience whether the scientific evidence yet available warranted such rigid measures The present regulations will certainly commend themselves to the practitioner They prohibit any person known to have Loffler bacilli on their mucous membranes from attending school or mingling in other public assemblies where innocent and unsuspecting persons may become infected Provision is made for informing every family in which diphtheria occurs regarding the method of its propagation and the dangers which may follow from contact with those who are known to carry the germs in their throats This knowledge having been furnished the patient and the attending physician are privileged, under certain limitations, to assume any responsibility and risk which may arise from the violation of quarantine This action is unquestionably wise It removes the chief objection which has been raised against sending cultures to the board of health It will undoubtedly encourage the earlier sending of cultures, and hence the earlier and more accurate diagnosis of diphtheria and would seem to sufficiently guard the public interest The endeavor made during recent years by the Board of Health of New York to aid the physicians of the city in their battle against disease can not be too highly commended The willingness also exhibited to correct errors and to render necessary regulations as little irksome as possible, is worthy of equal commendation "

Sanitary Rules for Schools in Indiana —The Indiana State Board of Health has issued the following letter of explanation in relation to the opening of the public schools for the fall term

"Simultaneously with the annual opening of the public school, diphtheria, measles, mumps, scarlet fever and many other diseases usually increase This is caused by the congregating of the pupils They mass together and contact spreads infection Some few pupils may have just recovered from a communicable disease, or they may be from families that have been smitten and, being infected, they transmit disease to those who are susceptible It is reasonable to assume that the suddenly imposed confinement in the school after a period of freedom frets the children for a few days, causing more or less nervousness and so resistance is temporarily lowered In this way susceptibility may be increased, and sickness may more readily follow To do all that is possible to prevent the usual school opening increase in illness is the object of these rules

"It is ordered in the rules that desk tops and banisters be washed with soap and water and afterward treated with a disinfectant This is required because it is more probable that disease germs are planted upon exposed desk tops and banisters by infected persons, and being transferred by the children's hands to their mouths, disease results The washing and disinfecting will do much to prevent infection from this source

"Open water buckets and large tin cups are condemned because the dipping of water with cups, which are used by many, introduce spittle into the supply, and beside, open buckets catch dust and dirt Diphtheria, diarrhea, sore mouth and other complaints have been transmitted in this way This source of disease may be avoided to a considerable degree by supplying a covered tank with a large, free flowing faucet and a small cup The opening of a large faucet will furnish a strong stream, which will suddenly fill the cup and wash the saliva from the edge Ample drainage must be provided for carrying away the waste water

"Slates are condemned because of their uncleanliness Writing and figures being obliterated as they frequently are, with spittle, and as the damp slates readily collect dust, the danger of transmission of disease in this way is very great Small children generally place pencils and pens in their mouths, and if these articles are promiscuously distributed without being sterilized, as the rules direct, infection may result The collection of pencils seems necessary to always insure one to each pupil

"Spitting is prohibited because it is a possible source of disease is filthy and is unnecessary

"These rules may seem trifling and unnecessary to those who have not given consideration to modern sanitation, but the teachers more than any other public officer may secure the physical well being of the pupils as well as the intellectual advancement

"It is hoped that all the school authorities of the State will promptly enforce these rules

"Douglas C Ramsey, M D , President

"J N Hurty, M D , Secretary "

COPY OF RULES ISSUED

Rule 1 All teachers of public, private and parochial schools, all county, city and town health officers and all school authorities shall refuse admittance to the schools under their jurisdiction of any person from any household where contagious disease exists, or any person affected with any evident or apparent communicable disease, or any person who may recently have been affected with diphtheria, membranous croup, scarlet fever, whooping cough, contagious skin disease, measles or other communicable disease, until first presenting a certificate signed by a reputable physician stating that danger of communicating such disease is past and said certificate is approved and indorsed by the health officer in whose jurisdiction the person may reside

Rule 2 All teachers of public, private or parochial schools shall refuse admittance to their schools of filthy or unclean persons

Rule 3 All school commissioners school trustees in cities and towns and township trustees shall have the school houses under their control put in sanitary condition before school is opened and kept so throughout the year Floors shall be scrubbed, windows cleaned, desks and all woodwork washed with soap and water and treated with a disinfectant Windows shall be in repair, so that ventilation may be made perfect Heating apparatus shall be efficient and in good order and dirty walls and banisters made clean Banisters and tops of desks shall be washed with soap and water and treated with a disinfectent once each week

Note The disinfectant for treating desk tops, banisters, etc , and for use in urinals and closets may be cheaply made by the following formula and kept on hand in any quantity desired To make ten gallons Chlorinated lime, 40 ounces, soft water, 10 gallons Thoroughly stir together and let stand until clear The undissolved lime will fall to the bottom and the clear supernatant liquid may be used on the desks, banisters, baseboards etc The fresh milky mixture, as well as the creamy sediment may be used in urinals, closets and sinks This disinfectant is not poisonous or dangerous Chlorid of lime of the best quality may be purchased in quantity for 5 cents per pound The cost of the disinfectant is, therefore, less than 2 cents per gallon The use of all patent or secret disinfectants is discouraged by the State board of health

Rule 4 School commissioners, school trustees in cities and towns and township trustees shall provide small drinking cups not to hold over a gill Buckets or pails to dip from are condemned, and reservoirs or tanks of ample size having large, easy acting, free flowing faucets shall be provided When water is drawn direct from public water pipes or pumps reservoirs or tanks are not required Ample drainage facilities for waste water shall be provided and the pupils directed to allow the cups to flow over when water is drawn Drinking cups shall be cleaned and sterilized daily

Rule 5 Slates are condemned Paper tablets or pads shall be used instead Riveted metal boxes of tin or galvanized iron with hinged covers and of proper size shall be provided for each school room These are to receive pens or pencils, which must be collected from the children each day, and shall not again be distributed until box and all have been sterilized by heating in an oven at or above boiling heat for one half hour School commissioners and school trustees in cities and towns and township trustees are directed to enforce this rule

Rule 6 Heating and ventilating shall be looked after with great care Every school room shall be provided with a thermometer and a temperature not exceeding 75 degrees Fahrenheit nor less than 65 degrees be maintained during school hours School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule

Rule 7 Janitors when sweeping shall use damp sawdust or slightly sprinkle in order to prevent dust Dusting shall be done with damp cloths School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule

Rule 8 The water supply shall be pure and wholesome and closet or privy facilities shall be unobjectionable School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule

Rule 9 Spitting on the floor of any school building is absolutely forbidden Teachers and all school authorities are directed to enforce this rule

Douglas C Ramsey M D , President

J N Hurty, M D , Secretary

NECROLOGY

William Turner Wooton, M D (Department of Medicine, University of Pennsylvania Philadelphia 1846) at Frederick Md , September 14, aged 74 years He was member of an old and distinguished Maryland family, was born in Montgomery County, but had practiced medicine in Frederick nearly all his life Dr Wooton was a frequent contributor to leading medical journals

John Lawrence Dawson, M D, at Charleston, S C, September 17 He was born at the celebrated Mitkin plantation, near Monck's Corner, in 1815 Was the son of Lawrence Monck Dawson and grandson of a daughter of Lord Proprietor Monck He graduated from the Medical College of the State of South Carolina, Charleston, in 1836

After leaving the Medical College Dr Dawson went to Paris with Dr Chazal and spent some time studying and visiting the hospitals Returning to South Carolina he located in Summerville After a year or two, however, Dr Dawson returned to Charleston For some years he was United States physician to the Arsenal garrison, city registrar and health officer, holding the offices simultaneously It was during his occupancy of these positions, in about 1840, when with the late Dr Henry W DeSaussure, he brought out the census of Charleston, which has been used as a standard authority since Dr Dawson joined the State Medical Society in 1837 and was prominent in its deliberations He was a member of the standing committee, and also treasurer of the Society for the relief of the Families of the Diseased and Disabled Indigent Members of the Medical Profession of the State of South Carolina, an organization of which he was one of the founders

P F Beverly, M D, at one time President of the Ohio State Medical Society, at Columbus, Ohio, September 18 from a stroke of paralysis, the third one in a year Dr Beverly was 69 years of age, and a graduate of Starling Medical College, Columbus, Ohio

Charles Bernacki, M D, of New York City, at Schandau, a Saxon watering place, September 17, aged 84 years He was born at Starascol, Galicia, studied medicine in the University of Vienna and, after some practice in military hospitals in Australian Poland, opened an office in Vienna After the political disturbances of 1848 he fled to America From 1846 he was medical director of the Germania Life Insurance Co

J C Sackville, M D, of Washington, Pa, aged 82 He was struck by a Baltimore and Ohio train September 23, and instantly killed Dr Sackville was a cousin of Lord Sackville West, formerly English ambassador at Washington, D C, and a brother in law of the English poet, Robert Carr Foster He graduated from the Royal College of Surgeons, London, England, in 1838

Edward Benkendorff, M D (Medical Department, Washington University, St Louis, Mo, 1847) He was a native of Prussia A relative of the same name is lord chamberlain to the czar

H H Hunt, M D, at Independence, Iowa, September 25, aged 72 years He was county coroner for thirty years and was also a surgeon in the late war

William H Perkins, M D, Long Island College Hospital, Brooklyn, N Y, at Hancock, Md, September 11 ——P S McArthur, M D, Geneva Medical College, Geneva, N Y, 1847, at La Crosse, Wis, September 19, aged 74 years

MISCELLANY

Treasurer's Notice —The Treasurer has received $5 00 in currency from Buffalo, N Y, which he will properly credit if the remitter will send in his name with date of remittance

Dartmouth Medical College —William Thayer Smith, M D, of Hanover, N H, has been appointed dean of Dartmouth Medical College, to fill the place of the late Dr Carleton P Frost Dr Smith has been professor of physiology for a number of years Prof Gilman Frost has been appointed secretary and treasurer

Professor Virchow's Birthday —A cablegram states that great preparations are being made for the birthday of Professor Virchow, which occurs October 13 Scientists from all parts of the world, including the United States, will be present with gifts and congratulations

Mutilation of Prisoners in Abyssinia —The Italian government recently sent an artificial limb maker to Africa to supply hands and feet to about two hundred and fifty native soldiers who had been captured by the Abyssinians and, after having each a foot and a hand cut off, were set free again, but the unfortunates who have been evirated can find no instrument maker to come to their relief Eviration is a cruelty much practiced by the Abyssinians on their Italian prisoners

International Scientific Language —In letter a written before his death by Prof Billroth to Dr Jankau he remarks I recommend the simplest of the Latin languages, Spanish, for an international scientific language after this would come Italian and French, and among the Germanic tongues, English alone English might even be preferable to all others, as it is one of the simplest But as the Latin races have no aptitude for acquiring foreign tongues, it is necessary on account of their great talents in scientific matters, to make this concession to them, and select one of the Latin tongues for the international language —*Gaz Méd de Paris*, August 29

Toxicity of Gastric Juice in Epileptics —Agostini has found that the gastric juice from an epileptic injected into the abdomen of a rabbit proves fatal with general toxic and clonic convulsions, especially if withdrawn immediately before or after an attack Gastric juice from a normal person injected in the same way does not produce any evil effects He considers these facts a valuable indication for the successful therapeutic treatment of epilepsy, with systematic rinsing of the stomach, disinfection of the intestines, etc He found that the toxicity was diminished by the administration of bromids —*Cbl f Phys*, August 22

An Ancient Russian Superstition —A fatal case arising out of the widespread superstition that a candle made from human fat bestows invisibility upon its possessor, is reported from Ostrogozhsk Two Russian thieves of the district were so firmly persuaded of the truth of this that they murdered a youth of their village in order to procure the candles in question Having cut open the body, they removed the fat surrounding the kidneys, and, placing it in a tin box, took it home There they proceeded to melt the fat over the fire Unluckily for them an old woman, their housekeeper, became suspicious and informed the authorities Her statement, coupled with the mysterious disappearance of the youth, who was a handsome and a popular young fellow of 18, led to the prompt arrest of the ruffians and their ultimate trial for the murder The body was discovered, and the portions lacking therefrom lent further confirmation to the crime

Can Commit to Insane Asylum —The supreme court of Louisiana holds, in the case of State v Uniake, decided June 30, 1896, that where a party has been indicted, and his counsel suggests his insanity, before trial, and a commission is appointed to inquire into his mental condition, and reports him to be insane, and the jury returns a verdict accordingly, and the judge of the criminal district court remands him to the parish prison, without a commitment to the insane asylum, the judge of the civil district court has authority, under section 1768, Revised Statutes, to inquire into the facts and circumstances of the case, and if, in his opinion, he is dangerous to the citizens and the peace of the State, to commit him to the insane asylum of the State

Right to Have Examination made by Female Physician —Under the provision of the New York Code that if a female plaintiff be subjected to a physical examination she shall have the right to have such examination made by a female physician, a decision was called attention to in the Journal of June 20, page 1245, to the effect that the fact that the order compels her to submit to an examination by a physician not of her own sex, is not a ground for the vacation of the order, she not having made any effort to have the order modified. But the appellate term of the supreme court of New York, first department, takes a different view of it, as its decision of July 27, 1896, in Lawrence v. Samuels, shows. It holds that the provision in question is for the protection of female suitors, and that the plaintiff in this case was entitled, as of right, to have inserted in the order the provision that a female physician make the examination, without making any special application for it as a favor or privilege, and that, in so far as the order appealed from a male physician named, it must be reversed, with liberty to the defendant to apply to the court below for the naming of such a physician as the Code authorizes.

Effect of the X Ray on the Skin.—We have seen it clearly demonstrated that the ray has an effect upon the skin, but only after frequent and long exposure to its influence. The appearance of the skin strongly resembles severe sunburn, with the accompanying pain, swelling, blistering and discoloration. The congestion in the hand is very marked, and the hand hanging in the usual dependent position occasions great pain. We have under observation at present a case in which the long exposure to the X ray has produced these symptoms, other exciting causes being positively excluded. The face showed the same series of changes as the hands.—*Canadian Pract.*, September.

Woman's Inferior Sensitiveness to Pain.—Ottolenghi reports in the *Cbl. f. Nerv. u. Psych.*, No. 7, that he has been testing with Edelmann's faradimeter the sensitiveness to pain and the endurance of pain in 682 women. He finds that women are less sensitive to pain than men, and that this sensitiveness is less in early life, increases to the twenty-fourth year, and decreases after that. The higher classes are most sensitive, and degenerates the least. He found the latter very obtuse to the sensation of pain. Endurance of pain varies between much broader limits in women than in men, reaching a maximum far beyond the masculine limit, possibly due to great "suggestibility" of the female sex. "General sensibility" reaches the highest point in the nineteenth year. He concludes from his investigations that sensitiveness to pain stands in close relation to the "psyche," while "general sensibility" depends upon the peripheral nerves. He consider woman's comparative insensibility to pain as a sign of her inferiority to man, as the uncivilized and degenerates are the least sensitive. He also attempts to prove a connection between this characteristic and her longevity.—*Cbl. f. Phys.*, August 8.

Might be Entitled to Accident Insurance.—A physician was insured "against bodily injuries sustained through external, violent and accidental means." While he was in his carriage on the highway, he attempted to administer to himself in his leg, for extreme exhaustion, medicine with a hypodermic needle. His carriage suddenly started causing him to accidentally insert the needle deeply into his leg. This, he alleged and testified, produced blood poisoning and suppuration. The physician who attended him recognized it as a case of cellulitis, with which the morphia used had nothing whatever to do, and which resulted from the introduction of the needle, together with some condition of the skin or needle. Five judges of the appellate division of the supreme court of New York heard arguments on appeal from a judgment dismissing on the merits the complaint in an action against the company which issued the policy of accident insurance, with two of the five dissenting that judgment is reversed and a new trial ordered. The court holds, Bailey v. Interstate Casualty Company, decided July 7, 1896, that the question whether the injuries complained of were sustained through external, violent and accidental means, within the meaning of the policy should have been submitted to the jury. If, in the use of the needle, an agency that otherwise would not have been in force, and which was the efficient cause of the injuries, was accidentally set in motion, it says that it sees no good reason why it might not be found that the injuries were attributable to the accident as the sole and proximate cause. As to the contention that the diseased condition of the leg arose from the use of morphin, and therefore within one of the conditions of the policy that upon the evidence it also holds was a question of fact for the jury to determine.

Regents Control.—The supreme court of Michigan holds that the constitution of that State gives the control of the University of Michigan to the board of regents, and that the legislature has no control over the university or the board of regents. On this ground it holds unconstitutional Act No. 257, Laws 1895, wherein the legislature provided that the board of regents should establish a homeopathic medical college as a branch or department of the University at Detroit and should discontinue the homeopathic college now maintained at Ann Arbor as a branch of the university, and transfer the same to Detroit. In consequence, it denies a writ of mandamus, which was asked in Sterling v. Regents of the University of Michigan, decided July 28, 1896, to compel action on the part of the board in accordance with the legislative will. It also suggests that the *attorney general is the proper party to move* in such a case, and a private citizen does not possess the right, without permission of the court, to apply for this writ to compel a public board to perform an omitted duty.

The Use of Oxygen After Ether in Surgical Operations.—Dr. William A. Morrison, of East Boston, Mass., relates several cases in the *Boston Medical and Surgical Journal* in which inhalations of oxygen most effectually and rapidly remove the unpleasant after effects of ether. From these cases he concludes: 1. That some cases receive much more benefit from its use than others. 2. That in the most favorable cases astonishing results follow, the nausea is apparently relieved or prevented, consciousness is quickly recovered, the breath is entirely deprived of the odor of ether in a very short time, and the feeling of malaise, so frequently complained of, is absent. 3. That some cases are not benefited (or are positively harmed) by its use. In another case of his, a man with a gangrenous foot, convulsions appeared soon after inhaling the gas, and he was therefore obliged to discontinue its use. He is unable to state why the man did not tolerate it. 4. That the best method of administering oxygen after etherization is by the use of a soft rubber catheter gently introduced into the nares until the eye of the catheter is approximately opposite the opening in the trachea. It seems to him desirable that all cases in which oxygen has been used after etherization should be reported, so that the profession should be assisted in determining what cases are likely to be benefited by the inhalation, and in what cases its use is contraindicated. This was recommended by Professor Jackson when ether was first administered.

Liability for Harshness in Examination.—In the personal injury case of Goodhart v. Pennsylvania Railway Company, which was decided by the supreme court of Pennsylvania, July 15, 1896, it says that the evidence in regard to the examination made by a physician on behalf of the defendant was not directed to the extent of the plaintiff's injuries, but to the severity of the examination. Its evident object was to persuade the jury that the character of the examination and the conduct of the physician in question and his assistants was unnecessarily harsh and annoying, and was a proper subject to be considered in assessing the plaintiff's damages. But the supreme court holds otherwise. It says that it must be borne in mind that a claim was being made against the railroad company for damages based upon an alleged injury received in consequence of an accident on its line In order to determine intelligently the extent of its liability, it was important for the defendant company to know the nature of the injury, and the extent to which the plaintiff was affected by it This could only be known as the result of a medical examination made by competent and experienced physicians The physician above referred to and his assistants were selected as proper persons to make the examination, and advise the company of their estimate of the plaintiff's condition, and its consequent liability If, in the discharge of their professional duty to their employer, they went beyond what was reasonably necessary and employed methods and tests that were cruel, and such as the judgment of the medical profession does not approve, and thereby inflicted injury on the plaintiff, the supreme court holds that they were liable for their own trespass, whether committed with malice or through ignorance But rudeness and incivility in the manner in which the examination was conducted, if rudeness or incivility can be affirmed of anything that was said or done in that connection, the court insists could throw no light on the extent of the injury actually suffered by the plaintiff, and the evidence referred to should have been rejected Damages for a personal injury, it says, consist of three principal items 1 The expenses to which the injured person is subjected by reason of the injury complained of 2 The inconvenience and suffering naturally resulting from it 3 The loss of earning power, if any, whether temporary or permanent, consequent upon the character of the injury—each of which elements it further discusses

Specific Immunity Versus Transient Protection in Cholera and other Infection Processes —Dr Pfeiffer in a *Deutsche Medicinische Wochenschrift*, April 11, having been employed in an inquiry concerning the different kinds of immunity that can be effected in the laboratory, offers the following as a part of the results of his investigations upon the subject of immunity The cholera poison is contained in the body substance of the cholera vibrio, so that dead, as well as living cholera bacilli show marked toxic properties The cholera poison becomes capable of absorption by the disintegration of the cholera bacteria, analogous conditions have been established as regards typhoid fever, anthrax, chicken cholera, staphylococcus infection, and apparently influenza Animals may be rendered immune to toxic doses of living cholera spirilla, and typhoid bacilli by previous treatment with various substances of bacterial and non bacterial origin This protection is transient, and does not depend upon specific changes in the fluids of the body, and is designated as resistance, in contradistinction to specific immunity In the blood serum of human beings and animals that have been exposed to the action of the living or dead cholera spirilla or typhoid bacilli, there occur specific protective bodies, which are thus capable of rendering aid in differential diagnosis in cases in which ordinary methods have failed, and these substances may be made to accumulate in the blood in concentrated degree by properly conducted immunization In their relation to chemic and physical agencies, they bear a close analogy with the antitoxins, from which, however, they are differentiated by their action While the antitoxins occupy a specific relation to certain poisons, and are capable of destroying these in the animal body, the anti bodies of cholera and typhoid fever are incapable of thus acting upon the poison of typhoid bacilli and cholera spirilla Their activity consists in the destruction of the bacteria, but this property makes itself manifest, as a rule, only in the body, and is capable of demonstration outside the body only under special circumstances These anti bodies are also found, though in small quantities, in the normal blood of animals and human beings They are neither bacterial products deprived of virulence, nor combinations of these with components of the immunized organism, but they are probably entirely new substances resulting from the specific reaction of the body to a specific irritant The evidence points to the view that the anti bodies are specific ferments It is possible that the antitoxins also are specific enzymes As fermentative activity plays an important part in the production of natural immunity, it is possible to relate natural and acquired immunity, antitoxic and bactericidal functions to a common general principle This report as will be seen, fully sustains the position assumed by this JOURNAL in an editorial entitled the "Failure of the Antitoxins"

A Question of Implied Contract —The defense to an action brought to recover for medical services rendered the daughter of the party sued was that the plaintiff was not in active practice at the time such services were rendered, that plaintiff was closely related to the family of the defendant by consanguinity and affinity, and the families were upon the most intimate terms, that for thirty or forty years plaintiff and defendant extended hospitalities, courtesies and favors to each other in the way of kindnesses and substantial benefits, without charges or any kind of legal obligation from one to the other, and that a greater part of the time defendant made plaintiff's home a general stopping place for rest, recreation and refreshments, and it was at these times and on these occasions and under these circumstances that the plaintiff, as the defendant then thought and believed, acting as much or more in the capacity of a friend than as a physician, examined and prescribed for the family of the defendant when indisposed The evidence both showed that the services of the plaintiff were rendered as stated in his account and that the relations existing between the parties was as stated in the defendant's answer, and that their conduct and transactions with each other were the same as alleged On the trial the court gave a charge to the jury to the effect that, if the plaintiff's demand was just and due he would be entitled to recover, and, further, that if they did not believe such account was just and due, and was contrary to law and equity, then they should find for the defendant The plaintiff asked a special charge upon the question of implied contract, which the court refused to give Under the circumstances the court of civil appeals of Texas holds, Bonner, v Bradley, decided June 13, 1896, the trial judge failed to properly charge the jury, and reversed the judgment which was rendered in favor of the defendant It says that when services are performed at the request of a party, the law will imply a promise to pay the reasonable value thereof, unless such request be made and acceded to as a gratuitous favor, and that if, at the time the services were performed by the plaintiff, it was not the intention of the parties that charges should be made for such services, then the defendant would not be liable therefor

Twin Extra uterine Pregnancy, One Fully Developed Fetus of Fifteen Years' Retention —The *British Medical Journal* quotes Dr Folet, in *Annales de Gynécologie et d'Obstetrique*, regarding a case of the above nature The patient, a Flemish woman, aged 49 years, had an abdominal tumor, dull, uniformly hard, devoid of all tenderness, movable in its lower part and extending three inches above the umbilicus, which was diagnosed as a fibroma, partially calcified, and abdominal hysterectomy decided upon As soon as the abdomen was opened an edge of bone (one parietal overriding another) was felt through a moderately thick sac of supple tissue, and the diagnosis at once amended to one of extra uterine pregnancy The sac did not appear to contain any fluid, it was partially adherent to the abdominal wall, from which it had to be detached with caution, it had many adhesions to the intestines, which were easily separated by the fingers Only one ligature was required and the tumor was only retained by its base, when with a circular rent it burst, and five sixths of the sac came away with the contents, leaving a funnel formed by the remaining sixth attached by its outer surface to the pelvic organs In the interest of the patient no endeavor was made to determine the exact relation of the sac to its surroundings the edge of the funnel was fastened by eight silk sutures in the lower part of the abdominal wound a large drain wrapped in iodoform gauze inserted in the peritoneum and the remainder of the incision closed Recovery was perfect The temperature never rose above 37 5 degrees C and in six weeks the cavity of the cyst was obliterated and the healing complete The structure of the cyst seemed to show it to be a tubal one It contained two fetuses, one (female) 16 cm in length, with well formed nails, had lived to term it was not, properly speaking, a lithopedion the tissues, though dense, were supple and nowhere calcified, and on sections of thigh and arm the skin and muscles were recognized by the naked eye and microscope The other fetus had died about the third month the thorax and head were much compressed, but could be made out and the members were distinct The cords of both ended at the lower end of the sac in a single placenta, the degenerated tissue of which was represented by reddish brown matter like touchwood, and broke into flakes on the slightest traction Some days after the operation it was ascertained through an interpreter, that sixteen years previous the woman had become pregnant, having before that had four children at term She duly quickened but at nine or ten months had a false labor, blood and membranes came away and she had hemorrhage for six weeks As she ceased to feel the movements of the child and nothing further happened, she persuaded herself that she had been mistaken, and that she had not been pregnant, the more easily because her abdomen diminished a little in size and her catamenia returned and continued until she was 46 A doctor whom she consulted two or three years afterward, while giving no definite diagnosis, deprecated any treatment She was led to apply to Folet on account of repeated attacks of pain during the last year, probably due to the peritonitis which caused the intestinal adhesions

Medico Literary Notes —A book by E Bonavia, M D , has just been issued by the Longmans, on studies in the evolution of animals, taking into account the markings of animals as well as their coloration

Cruden labored nineteen years on his "Concordance to the Bible," and immediately after its publication was sent to an asylum He never entirely recovered from the mental disease induced by this gigantic undertaking

Dr Conan Doyle lately confessed to the London Authors' Club that he first began to write to get a little money to pay some bills For nearly ten years most of his manuscript came back to him by return of post His first profitable article was for a trade paper Dr Doyle says the choicest moment of his life was when Thackeray patted him, a boy of five, on the head and praised him His last book, called "Rodney Stone, ' has a good deal in it about the fistic science, which was in its prime about a century ago

Messrs Thacker, Spink & Co , Calcutta, publish a new edition of "The Indigenous Drugs of India," which has been produced by the Rai Bahadur, Dr Kanny Lall Dey, in association with Mr William Mair Fifty copies of the book have already been purchased by the government of India The work is dedicated with permission to the Pharmaceutical Society of Great Britain, of which Dr Dey is an honorary member, and extends to over 400 octavo pages It will be published in London within the current month

Among the various devices now being tried to relieve Guy s Hospital, London, of its financial difficulties, is that of raising a sufficient sum to permanently endow a bed in memory of the poet Keats, who served a short time there as a medical student

In Huxley's "Autobiography" he stands up for truth as greater than facts, and life than information He says, "Life seems terribly foreshortened as they look back, and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges, when, with failing breath, they reach the top But if I might speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all problems of life to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind excepting veracity of thought and of action, and the resolute facing of the world as it is when the garment of make believe by which pious hands have hidden its uglier features is stripped off "

The Medical Chronicle is the title of the medical journal conducted by the faculty of the Owens College, Manchester This college will open its winter session on October 2, and Mr Jonathan Hutchinson has consented to deliver the introductory address, in the physiological theater of the new medical buildings

Mr C C Bell, in *Chemist and Druggist*, writes of the medieval names of drug plants He says many of the English names occur also in Lyte, Gerard, Parkinson and the other old herbalists, and a considerable number are still in use, but these are not now in every case applied to the same plants as formerly Gerard gives others of them in his list of obsolete names, but when these are deducted a good many still remain which had gone out of use before he wrote Among these are some of especial interest Donnhoof (spelt "donnhove") is one It is the same as coltsfoot, "donn" or "dun" being an old name for horse, whence comes "donkey" or little horse "Wowel" and "feldhove" are names given to the same plant "Cetewale," which the glossaries give as English for "zodoar" (zedoary, a species of tumeric), appears in Lyte and Gerard as "setwall" a name for valerian, Chaucer, in "The Millere's Tale," names it along with licorice Wermode in these glossaries means "wormwood" and is the correct form Skeat explains it as "waremood" (preserver of the mind), Mr Mowat, with greater apparent likelihood, says it is "ware moth" (preservative against moths) This certainly accords with the French *garde robe*, and with our old rhyme

> ' Where chamber is sweeped and wormwood is thrown
> No flea for his life dare abide to be known '

which, however, Mr Mowat does not quote Wilde kevn, again (which appears in the glossaries under vicus quercinus, and is evidently an echo of the French qui de Chene), is not in Gerard Other names calling for particular mention, some of which appear in Gerard and some not, are "groundswile" (ground swallower), an appropriate name for so prolific a weed as groundsel, "wymalve" (French guimauve), for mallow, "hepebrede" (hip bread, for dog rose, "horse heal," for elecampane marygold is called "yellebotel," or yellow bottle Shepherd's needle, which Gerard calls "ladies' combe," is glossed less flatteringly as "pouclesnedele," which, on the authority of a quotation in Halliwell, may be taken as equal to devil's needle, dandelion (dens leonis) is "doleronue ," hollyhock as St Cuthbertscole bryony as "wildnep, ' burdock has given to it the name filantropos, because its seeds stick to men's clothes duckmeat appears in a particularly interesting form as "cibus anatis ang enedechede" (a clerical error for "enedmete, "ened" being an old name for duck) Similarly "paddocstol" recalls the old name for frog or toad "Cold as paddocks though they be, Here I lift them up to Thee," says Herrick's child of her hands in her "Grace before meat ' "Aleon' are distinguished as of three kinds, cycotrium epiticum and caballinum Opium appears as "opium Thebaicum' (indicative of its geographic source), glossed "succus papaveris albi" and "opium miconis, succus papaveris nigri "

The entry immediately following this is a sad muddle, being "Opium quirrinacium, lesera, quilleya, succus iusquiami, idem" This is in "Alphita" In the "Sinonoma" "opium quirrinacium" is glossed "assfoetida idem," what "quilleya" is, it is impossible to say, "iusquiamus" is henbane This is only one instance of many hopelessly confused glosses White, black and red poppies appear under their respective Latin names, and of the second we are told that diacodion is made Nothing more is said of their use *Cowslip* appears under "paralisis herba" as "cousloppe," meaning cowdung, a not very poetical name, "endyve" is under lactuca The glosses on dracunculus are interesting as specimens of the fancifulness of our forefathers "Dracuncia, asclepias, viperina, pentaria, serpentilla, colubrina, basilica (basilisk), cocodrilla (cockatrice), idem gallice et anglice, dragaunce" ("in English, dragons," says Gerard, who gives an equally long, but different, set of synonyms from Epuleius Barbarus) "Mandragora" as described at length are of two kinds, male and female, no other name is given to it "Sene" (senna), again, has as yet no English form, and it is interesting to note that both these plants are mentioned by Shakespeare in the form here given "Zinziber" also appears only in this form, and rhubarb only as reubarbarum

Hospitals

New Post Hospital for Fortress Monroe, Va —The Government will build a new hospital to cost about $20,000 Plans for the hospital have been received, and the work will be let by contract after thirty days' advertisement

Pennsylvania Hospital Annual Report —The managers of the Pennsylvania Hospital have issued their annual report, showing that in the Pine Street Hospital the patients remaining in May, 1895, numbered 210 New patients received in the year to May, 1896, were 2,408, remaining at latter date, 186, beds occupied, 2,618 A large amount of work was done by the out patient department, the visits aggregating 16,197 In the department for the insane the figures for the year were Women, new cases, 88, discharged, 82, remaining, 233, men, new cases, 77, discharged, 91, remaining, 181, total treated, 587, remaining, 414

A Cottage Hospital at Proctor, Vt —A new hospital at Proctor, Vt, was formally opened on August 8 It is a modern building, a short distance from the center of the town, and arranged to accommodate ten patients The first story has an accident and operating room thoroughly equipped with modern surgical furnishings One of the wards is also on this floor The domestic and executive arrangements are all in the second story The hospital has been built and equipped by the Proctor Marble Company, and while primarily intended for such of the employes as may need its services, it is to be open to any person in the village The management has been placed in the hands of a committee of townspeople The district nursing in the town, which is already completely established, is now to be done from the hospital by its training school The attending physicians thus far appointed are Drs J M Hamilton of Proctor and H H Swift of Pittsford —*Boston Medical and Surgical Journal*

Philadelphia

Dr B Meade Bolton, Director of the Bacteriological Laboratory, wishes it to be distinctly understood that he is not responsible for the recent establishment of the plant in the City Hall for the manufacture of disinfectant solution, known commercially as electrozone The tests which have been alleged to have been made in the city laboratory he states were not made by him or under his direction and that he has not had anything to do with testing, reporting or publishing anything in regard to the matter, which is understood to be under the supervision of the City Board of Health or some of its officials

The report of the unsanitary condition of the League Island Navy Yard, arising from the fact that cases of typhoid fever have occurred recently in several vessels which had been fitted out at this place, has led to an investigation which is now in progress by the authorities at Washington The Board of Health has not been able to find any case of typhoid fever at the station or within several miles of it The water supply is not derived from the city pipes, but from cisterns filled with rain water so that the infection is not due to the use of water from the Schuylkill, and there is no great prevalence of typhoid in the city at present

THE PUBLIC SERVICES

Army Changes *Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army from Sept 19 to Sept 25 1896*

A board of officers is appointed to meet at the Headquarters Department of the Missouri Chicago Ill on Monday Oct 5 1896, at 10 o'clock A M for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion Detail for the Board

Lieutenant Colonel Albert Hartsuff Deputy Surgeon General
Major Henry Lippincott Surgeon
Captain Norton Strong Assistant Surgeon

The following named officers will report in person to the president of the examining board appointed to meet at Chicago, Ill, on Monday, Oct 5 1896 for examination for promotion

First Lieutenant Henry C Fisher Assistant Surgeon
First Lieutenant Henry A Shaw Assistant Surgeon
First Lieutenant Charles F Kieffer Assistant Surgeon

Major John V Lauderdale, Surgeon will upon the arrival of Major Egon A Koerper Surgeon at Fort Crook, Neb, repair to his home and await retirement

Major James P Kimball Surgeon is relieved from duty at Fort Wingate New Mexico and ordered to Fort Columbus N Y for duty, relieving Major John Van R Hoff, Surgeon Major Hoff, on being thus relieved is ordered to Vancouver Barracks, Washington for duty relieving Captain Rudolph G Ebert Assistant Surgeon Captain Ebert, on being thus relieved is ordered to Philadelphia Pa for duty as attending surgeon and examiner of recruits relieving Captain William W Gray Assistant Surgeon Captain Gray on being thus relieved is ordered to Fort Apache, Ariz, for duty relieving First Lieutenant Irving W Rand Assistant Surgeon Lieutenant Rand, on being thus relieved is ordered to Fort Clark, Texas for duty

Navy Changes *Changes in the Medical Corps of the U S Navy for the week ending Sept 26, 1896*

September 23 —*Passed Assistant Surgeon G A Lung, detached from the* Vermont and ordered to the naval hospital Chelsea, Mass

Passed Assistant Surgeon H D Wilson detached from the Chelsea, Mass, hospital and ordered to the 'Bache'

Passed Assistant Surgeon G H Barber ordered to the Naval Academy

Assistant Surgeon M K Johnson, detached from the Bache' and ordered to the New York'

Assistant Surgeon F C *Cook, ordered to the* "Vermont"

Change of Address

Butler T J from Chicago to Lockport Ill
Case C E from Tacoma to Everett Wash
Johnson C W, from 625 Locust St to 2309 Locust St St Louis Mo
Todd F Walton from Coronado to Camp Capitola Santa Cruz Cal
Taylor, P K from Kingston, R I, to 211 W 139th St, New York, N Y
Walsh, T C, from 330 Grove St to 860 Greenbush St Milwaukee Wis
Wiggin, F H, from Littlefield, Conn, to 55 W 35th St, New York N Y

LETTERS RECEIVED

Alta Pharmacal Co St Louis, Mo, Allport, Frank, Minneapolis, Minn Adams A I Jacksonville Ill

Bernd Henry & Co, St Louis, Mo Bourns, F S Atlanta, Ga Benjamin, D Camden N J Bumstead J E Dundee Ill

Dewey Richard Wauwatosa Wis Drevet M'f g Co, The New York, N Y Douglas, Richard Nashville, Tenn DeCourcy J O, St Libory, Ill

Epley, I W New Richmond, Wis

Feiel, A Columbus Ohio

Galloway D H Chicago Ill Gradle, H, Chicago Ill

Hammond, J C Denison Iowa Hot Springs League Hot Springs, Ark Hahn H H, Youngstown Ohio Haddock W J Iowa City Iowa Hummel, A L, Adv Agency New York, N Y Higgins F W, Cortland N Y Hoffman J R, Ottawa Ill

Imperial Granum Co Youngstown, Ohio

Jegi H A Arcadia Wis

Krebs Paul H, Cleveland Ohio Kibler, C B, Corry, Pa, Krause, Wm C Buffalo N Y

Laughlin Pen Co (2) New Haven Ind Lautenbach, L J, Philadelphia, Pa

McBride, R E Gibson City Pa Merrill Wm Stetson, Chicago Ill Marchand, Chas New York, N Y Mizell A G Chicago Ill Mettler, L Harrison (2) Chicago, Ill Merrick M B, (2) Passaic, N J

Nelson C D Greeley Colo

Ozone Company Chicago Ill

Parmele, Chas Roome, New York N Y Pettit J W Ottawa, Ill

Rockey A E Portland Ore Reed, R Harvey, Columbus Ohio; Rosenberry, A J Wausau Wis

Schneider August Buffalo N Y Stowell, Chas H Washington, D C Savage G C Nashville, Tenn Spencer John C, San Francisco Cal Schieffelin W H & Co New York N Y Steele D A K, Chicago, Ill Starr G L Hudson Ohio Simmons Geo H, Lincoln, Neb

Tyree, J S Washington D C Tuley Henry E Louisville, Ky

Wilson Cunningham, Birmingham Ala Wilson, A J (2) Chicago, Ill, Walton Oxygen Works New York, N Y

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LECTURE

MEDICAL EDUCATION

Opening lecture delivered at Rush Medical College, Chicago
September 29, 1896

BY EDWIN KLEBS, M D
PROFESSOR OF PATHOLOGY

Ladies and Gentlemen The wish expressed by my new colleagues that I open the lectures of this new year of medical instruction by some considerations of our work, laid upon me the somewhat difficult task of explaining my opinion, in a foreign language, on the organization of schools in this country, with which, also, I am not yet perfectly acquainted

You must not think that this will be a confession of my ignorance of American history and institutions On the contrary, I have always, from the time of my youth, inspired by the treatises of Ralph Waldo Emerson, loved this land At the time of the great civil war I eagerly studied the work done by your fathers, who, destitute of everything necessary to carry on a successful war, decided to live or die for liberty and humanity

I was astonished at this time to acknowledge the origin of a new war hygiene, later further developed in the great wars of the old country Comparing the great losses in the Crimean war, which preceded the American civil war, with those of the Franco-German war of 1870, you will not fail to see the great progress in this new field, principally, as I think, effected by the distribution of the wounded and sick over vast areas, by means of the mighty streams

It seems to me that the American people, impelled by urgent necessity, became more and more inventive, and learned more in a few years than it would have learned in centuries without that impulse

The wonderful development in this land that you all know, from your own experience, now followed during the short period of twenty to thirty years All facilities were enhanced by the confidence in the restored Union, enormous wealth and prosperity, such as were never known before in history, were arising from the soil of the new land

Naturally, then came depression In the restless strife for improvement many things, without which a people can not be happy, were not taken into account I only mention the devastation of woods, threatening a change of clime, unless replanted systematically, an injury not otherwise to be remedied

Political and financial influences have more and more increased the internal difficulties, so that now will come a time when the labor of the whole land will be required to sustain this prosperity

But how will the people endure this change of conditions, the irreparable loss of so many facilities? I think that they will accept the new position, the harder strife for life, the conditions of life impaired and narrowed also by the competition of the whole world This confidence is based in the first place, on historical facts A people who have surmounted the hardships of a civil war will find a method also in this harder time, but in another way

Not the pioneer and the digger, but the teacher and educator will be the leaders in the new course Science will be the aim and purpose

The educational question now moves the whole world European civilization based wholly on the old classic traditions of Rome and Greece, has reached, especially in Germany, a standard in classic education which seems to be incompatible with the claims of modern life Natural science will more and more supplant the ancient literature and the modern philologist finds that the modern languages have attained a higher certainty and clearness by which to express the modern thoughts than the dead languages now occupying nearly the whole time of the scholar

The reform of higher school education now commencing in Germany, will save our country from imitating the so-called classic studies Let us fill the mind of the child and the youth with a broad knowledge of earth and heaven of living beings and dead material, of human life and thought, history and philosophy, so that they may understand the coming life and be able to distinguish the good and the evil, the just and the unjust, religion and morals must have a prominent part in this system of education What I wish to say is this, that for the young man or woman willing to devote themselves to medical science, a nonclassic education is quite sufficient But the requirements of preliminary education necessary for admission to our colleges, seem to be totally insufficient Unless certain literary colleges have been attended, an examination in writing, in the branches of a good English education, including algebra as far as equations of the second degree, the first book of geometry, English composition, elementary physics and the elements of the Latin language should be substituted, chemistry and physics will be taught in the freshman year

I do not find in the program the descriptive natural sciences, the natural history of plants and animals, the geology and mineralogy, which contain the elements of so many parts of the medical science, not to speak of knowledge of human history, art and thought I am quite sure that a great number of our pupils have completed their education in these directions, but I doubt if that is the case with everyone

I do not pretend to propose reformations, but I do hope to find the young men better educated than the scanty requirements for admission to the leading medical colleges lead me to believe

For comparison, I will give a short outline of the requirements in German universities, in natural history only The young men entering the university have learned a great deal of natural history at the gymnasiums, but before commencing the medical studies they must spend a whole year's course in natural sciences, such as botany, zoology, chemistry and physics, including practical work in microscopy and the chemic laboratory.

If we look at the schedule of Rush Medical College we will perceive that in the freshman year no more than 745 hours are devoted to study, in the following three years from 870 to 1,036. I think that one could very well dedicate 150 to 200 hours to the study of botany and zoology in the first year. But this, as other practical questions, must be considered at another time. Furthermore, I would wish for a certain knowledge of the German and French languages, already required by the Johns Hopkins University, also some ability in drawing. Without knowledge of these modern languages the medical student can only make use of the English literature and translations from the German and French, but as the greatest part of medical literature and the most valuable is published in periodicals, the student can not fully understand the medical literature of his time without this knowledge of modern languages. As the development of science is a very rapid one, scientific work is not possible without personal literary study.

But we have given enough detail on medical teaching. Let us now look at the American students and their qualifications for this science. As I have had many opportunities to teach Americans in European laboratories, I am prepared to speak upon that point with due reservation. First I will say something about the ladies studying medicine abroad. The greatest number I had in Zurich were Russian or other Slavs, German, Swiss and American. The best prepared for study were Swiss, American and German. In diligence they surpassed nearly every male student and as far as memory is concerned, it was very difficult for our male students to attain better marks than the female in the examinations. In the anatomic and microscopic work, over which I made personal observations, I found American ladies among my best workers, in the composition of publications there were some differences, however, depending more upon the personal character than upon mental faculties. One lady whom I highly esteemed for her assiduity and very clever work, labored somewhat under a too much developed pride, declining every help in the composition of her paper, which, based upon delicate microscopic researches, would have made more impression if the points and the deductions had been more thoroughly discussed. I do not know if that was a personal propriety, but I can understand that a woman prides herself on independent work, this pride can be a very good support in the hard work awaiting the doctress. I shall ever remember another American whom I had the pleasure to aid in her original work, as the best example of a medical student, fitted to do any scientific work. In this direction I must give the American ladies the first place and I hope to see here the same attainment in practical medicine.

As to the qualification of American men for scientific medical work, there can be no doubt. From my youth to the present time I have had many opportunities to come in contact with them as a teacher, and can openly express my opinion, that they would not, in any way, remain behind any other people, only being handicapped by their preliminary education and imperfect knowledge of foreign languages. But these slight defects were compensated for by a burning zeal for learning. My first experience dates back to the early sixties, when I was assistant of Professor Virchow. My first pupil, a man as old as I, was a Californian and showed, perhaps, more enthusiasm than your Eastern people, but I will never forget his open-hearted joy, when he understood a difficult matter, explained by the inexperienced teacher, in pretty bad English. And I have made the same observation, repeatedly, through a quarter of a century. All young Americans that came to me for study, were brave, joyful, enthusiastic people, but sometimes a little deficient in school education. They have all been my friends.

You, probably, all know the cause of these characteristics. The American life is a practical one, and the arts and sciences, here, come in second place. But I am sure this state of things will change before long. Deficiency in education is more and more improved and there are many men of the highest and most refined education in liberal arts and sciences. One of my friends in Germany, a learned man of high standing, a deep critic of Göthe, stated that he was astonished by American visitors, oftentimes finding that they had the most profound understanding of German literature and philosophy. That is a good indication of what can be done by your people in medical science also.

In medical practice we can certainly meet any competition, but not in medical science. The reason for this is to be found in the organization of our medical schools, which I have already touched upon. I understand very well that these organizations resulted from compromises and that under given circumstances, for the moment, higher attainments could not be demanded without driving a large number of students into the hands of so-called medical colleges, which one of my friends designated as "paper mills," a shameless scattering of diplomas for money.

Regarding these facts I can not find a better remedy than to place the higher education in the hands of the Federal Government. This would present many difficulties, as I know from my experience in Switzerland, and I would not like to interfere in practical questions. But we can take these matters out of the hands of the government and regulate them. By "we" I mean all good citizens who find that the prosperity of the country depends upon the education of the people. Very much is done in this direction. For our prominent scientific institutions are founded by private individuals, by donations, often rich men restoring a part of their earnings to the people, the well-conducted work of whom has procured these means. A political economist in Germany has named that the "inheritance of the people." "To give is more blessed than to receive," said Jesus, the greatest socialist. Yes, we will bless these rich men who will help in the education of the people and perhaps prevent the day of wrath. But not alone to the rich people should the appeal be made to assist in the educational question. Every physician, every patient is interested in this work and can afford to promote the higher medical education. I am sure the generous American people will favor progress in higher scientific education.

Here arises a very important question. Is the efficiency of such institutions for higher learning assured by money alone? Can money buy such institutions, as it can buy railroads or steamships?

The success in original scientific work depends more upon the worker than upon the external conditions of work. In my youth I have seen Helmholtz, the great physicist, work out his great discoveries in optics with the simplest means, and calculating with a child on his lap. The great mathematician, Gauss, when asked how he had found his new methods enormously enlarging mathematic conception, replied "By repeated thought over the same matter." So we see that the personal conditions for scientific work are given everywhere, if there is a quiet place for thinking and men apt for this work. An exceptional mental faculty is not necessary for this, as not every learned man needs to be a genius. Continuous work is sufficient if the right way is laid open. Such indicators (Wegweiser) guiding the seekers after knowledge will arise in every country where learning is esteemed and supported.

I have experienced a striking example in my own life. I came to a university, in a land where science was not much developed, but proud of its great political power in a past time. This aristocratic people, with high self-consciousness, resented bitterly that so many strangers were called by an intelligent government to fill the chairs at the university. Some wished to injure the intruders, not personally, but by diminishing the number for instruction. A politician of high standing was induced to promote the attack, which would be adverse to the development of the university, when one of the professors opened the eyes of this political leader, showing the true aim of his associates, by saying: "You, as a liberal and reformer can not support an action against natural development. Give good seed to the soil and you will see good fruit ripen. Learned men can not be found everywhere. Take what you have and you will see, that in some generation, you will have enough support from your own countrymen." Thereupon the good man ceased to support his tempters and the chairs of the university are now, after nearly thirty years, occupied by a great number of native teachers, universally acknowledged to be of the highest rank.

What I wish to show by this experience is that higher study needs a thorough cultivation, continued for a long time. It is the same as with the cultivation of plants. If King Probus had not planted the grapes on the borders of the Rhine, the Rhine wine would not have won its world-wide celebrity. I tasted the California wines some forty years ago and I was not pleased with it, but now it is quite a different thing.

As we can not reform the whole system of higher education at once, we must commence slowly, warming and protecting the delicate plant sown in a soil in which, as yet, other plants, industry, farming, business of all kinds have grown so luxuriantly. If the soil commences to be exhausted by the one fruit, the good farmer will plant another. Science is a plant that has borne very good fruit in old Europe, why should it not develop here, when a young, fresh people, free from many prejudices of the old world, will strive to win the first rank in the great problems of the human mind?

But how shall we promote strong scientific work in our department, the medical science? In the first place you must change your opinion on the tendencies of the college or university. It does not suffice to have excellent instructors and well educated pupils, but we must have the will to give or receive more than medical instruction, sufficient for medical practice, or only for the examination. That would be the office of a high school or a university, in the sense of German universities. More than in other countries, you will find that these institutions are founded not only for education, but also for observation.

The difference between a school and a university is not always comprehended as it should be here, nor in Europe. As a young professor, I often spoke with business men about the difficult task of a university professor, but they did not understand me. "Oh," one said, "I think, in the first year, that it may be very difficult to lecture so much, but later one learns that." This is only too true, many professors learn to repeat the same lectures, and very amusing anecdotes are told in Germany about teachers accustomed to do this. One of these learned professors, reading his lecture absent-mindedly, also read the foot-note: "Here I like to make a joke." But I can assure you that this sort of professors died out, and from that time the acknowledged glory of German and other universities commenced to fill the world and attract people from every country. By these remarks I do not mean to say that German universities are perfect. As the devil always sows weeds among the wheat, so there the high position of professorship has attracted many inferior people who rely more upon protection than personal worth, and the egotism of many professors goes a little too far. Where there is much light there will also be shadow, but at all events we can look to German universities as the best examples of our scientific schools.

The first object of these schools is, and must be to educate the pupils to scientific and practical work. We must educate them to be independent observers, for a physician must have this quality, and without it he will not enjoy his task. He may fill his position very well, operate and prescribe, but if he does not look at his patient with the eyes of an observer he will fail to see many features of the highest importance. To the superficial physician not trained to careful observation, one case looks like another and he will be astonished if the expected effect of a certain remedy does not appear. It is, as with a savage people or a flock of cattle to the unexercised eye, they seem to be all alike, the observer, however, if he be an experienced traveler or a cattle grower, will see the differences. Certainly the good physician will learn, in the office and at the bedside, what he has not learned at school, but it would be better if he would go out into the world wholly instructed and experienced. Scientific work, done while a student, will aid the practitioner.

Hoping that you are convinced of the great importance of this truly dominant question, I will add some suggestions as to what should be done in this direction. First, every laboratory should be so arranged that a certain number of students and also of younger graduates could work, not in learning the elements, those must be understood, but for original scientific work. The smallest problem which we attempt to solve brings with it more elucidation than the reading and memorizing of a whole text-book. I fear that in our method of teaching learning, memory is too much relied upon, recitations prevail and not discussions. With young people, working on problems there must be more discussion than recitation. I prefer a student who does not know so many facts, numbers or figures, but who understands the connection of facts and how to make conclusions from the known to the unknown

In the laboratory opened for the work of students, it is not necessary to give long lectures but to discuss the matters in a conversational manner

Whoever is farther advanced in his work, will come and expound his results to the teacher and his colleagues From the discussion new thoughts will arise not before given by the teacher The scholars can learn without feeling that they are being instructed I hear that such a system has been commenced here in private primary schools, if it is practicable with children, why should it not be with thinking men?

But in this matter another side is to be taken into consideration If we have such laboratories who will work in them? The student is busy the whole day and the young physician must oftentimes attend to making his living I do not think that people are poorer here than in Germany, where all this is done, but if so, the means for such work must be found and I do not doubt but it will be In German universities we have so-called stipendia, which enable the poorer student to continue his studies, and beside that, we do not want to have medical proletarians (a very good word of Billroth) Whoever undertakes this noble study should first find the necessary means The poor should not be excluded, but they must show the true qualifications

For the young graduates, working to perfect their education, I would recommend the two appointments which, in my opinion, have made German universities great, first, the doctorate, obtained by scientific work, second, the private university teachers (Privat-Docenten)

The title of doctor, historically, means more than that of physician, it expresses a scientific qualification, shown by original scientific work For that degree the publication of a dissertation is required, that is, a scientific treatise and theses, scientific questions which the applicant will defend in free debate against every one

This venerable practice has been, as all human things, liable to deterioration, but it has influenced, in a very ostensible manner, the high standing of the profession Innumerable students of medicine have been compelled, by this custom, to do original work, or treat clinic observations in a historic and critical way Certainly the dissertations have awakened many literary talents which would have slumbered without this incitement

Graduation or examination is necessary for the *Doctorat*, the latter is intended to show the qualification for scientific work and teaching It is therefore indispensable for every physician teaching in a medical faculty

The private lecturer, privat-docent, is a position quite unknown in English and American colleges, in France the professeur agrégé occupies nearly the same position The title privat-docent is conferred by the faculty, on application, for a certain branch of science He lectures in the same manner as the professors, mostly supplying gaps in the regular lectures or giving lectures on special parts of the science, elaborated by his own work Many of the private lecturers are assistants, and are given the opportunity by their chief to deliver special courses Without going into particulars, one will see that this institution is highly adapted to the education of professors

I wish to submit this institution of private lectures to the earnest consideration of leading men in this country Having so far only touched upon the student epoch of medical men, we can not make the whole importance of this discussion quite clear if we do not explain the standing of our profession and science in public and private life

The profound change which our science has undergone in the last century will be made clear by some historic references In the earliest times medicine was in the hands of the priests and based only upon occasional observations such as were made by the people Hippocrates destroyed the secret and put these ideas into systematic order The observation of facts became controlled and the work of physicians subjected to general rules, governed always by moral laws, highly appreciated at all times by the true physician Since that time the work of the physician possesses a sacred feature The patient needs to rely, with full confidence, on the knowledge and the truthfulness of his physician He must know that he can not be deceived, although errors can not be entirely excluded If the physician has any doubts consultation may be sought

The medical profession must be so organized that it will be the best for the public Quackery and evil conduct are more contemptible than in any other occupation Where the government does not protect the medical profession it must protect itself, as is done here by the code of ethics, accepted by the AMERICAN MEDICAL ASSOCIATION

This organization, securing the interests of the public as well as of the physicians, has sometimes roused distrust rather than confidence, but a thinking man will congratulate himself for having a medical profession caring for its honor This position of the profession seems to be one of the principal features which attracts the young men to our lecture rooms The practice is not so lucrative as in the old times, when one would say "*dat Galenus opes*" The sense of humanity forms another attraction to the medical science, if the physician can help, he is loved as a god, and to the incurable he can always bring comfort and diminish their suffering

In our time, in which the strife for gain seems to reign, the people have double interest that our profession preserve these feelings, and I hope that the public will support them It will be to the interest of the patient that he follows obediently the prescriptions of his physician I have seen so many patients ruined by their feeble, distrustful character, changing from one physician to another, thus losing the best time in which they could have been saved But, on the whole, I have found the American to be an excellent patient, not excited, not nervous, but quietly doing and sustaining whatever was necessary I have never elsewhere seen so much courage in enduring pain

But the position of the physician in our time must be looked upon from another side The change in the medical principles, effected in the last thirty years, is so enormous that weaker minds could not follow On the whole, one can say that the younger generation has fully adopted the new theory of the bacterial causes of disease, though not always willing to make the necessary deductions

How great this change was may be shown by an example The two pathologic conditions, which alone nearly governed the old pathology, were "fever" and "inflammation" The seething of bad humors or juices in humoral pathology, the struggle of the soul, the Archaus of Stahl, through many centuries formed personifications of disease, very apt to be attacked by the zealous physician, who mistook the signs or symptoms of the disease for the disease itself Under this delusion such things as "essential fever," or fever in itself were spoken of Later, under the auspices of a more developed physiology, one tried to explain these phenomena by the doctrine of irritation Albrecht von Haller has shown that irritability is the general property of all living substance, a property consisting in the outbreak of the genuine activity of the organ, after an external influence has acted as an irritant So the muscle will contract, if it is acted upon by mechanical, electric or chemic influences in the same manner as it does when irritated by its nerves through the action of the brain or by an electric current The action producing the irritation can be of very different nature, the effect produced upon the body is always the same You will understand this if you think of the works of a clock moving in the same manner, whether its spring or pendulum be put in action by the hand, by an earthquake, or by removing a hindrance

This theory seems to best explain the two symptoms governing, or of disease itself From Broussais to Virchow this explanation prevailed, giving very good indications for therapeutics If the irritability of an organ or the whole body is increased, one has recourse to remedies of a soothing, mitigating action, if the irritability is deficient, one must irritate, if the two processes do not help, according to the doctrine there only remained the counter-irritation (contrastimulus) If, for example, an inflammation of a knee-joint was treated without good result first with cold later with warm poultices, there remained only a counter-irritant, the burning The consequence was that old country women, shepherds, etc , sometimes had greater success than learned physicians

This inadequate doctrine was destroyed by pathologic anatomy, which, from the end of the last century, was more and more developed in Europe, first in France and England then in Germany After many great predecessors, Rudolph Virchow developed a new doctrine which seemed, at first, to cover every logical desire, namely, the cellular pathology

This doctrine showed the composition of the body to consist of a great many living organisms, the so-called cells, bound together by the common action of vessels and nerves This theory disclosed manifold processes in disease, in their minutest details, it enriched our knowledge, but it did not advance our therapeutics, to the action of cells was confined the regulation of irritation So the cellular pathology was thought to have found in the action of the cells, the whole essence of disease, and the question, Why do the cells act in an abnormal manner? was asked no more

For Virchow and for many of his pupils and followers, the question of cause did not exist He declined to go farther, with the oracular answer of a sovereign, "We can not know all things"

I admire R Virchow very much, having been for a long time his pupil and assistant, having learned from him the finer distinctions of pathologic processes I acknowledge that he has enriched pathology more than any one else before him, but he did not have the right to command a stop to all other progress in our science The word "why" must always be used, if the knowledge does not cover the whole truth and does not explain the cause of action

Already a new dawn announced the bright day of our present knowledge Medical historians and geographers remembering the spread of the great plagues, and enlightened thinkers, as Henle, had, contemporaneously with Virchow's cellular pathology, proclaimed the theory of the external origin of contagious diseases, from living matter, the germ theory hinted at in oldest popular medicine The microcosmos were opposed by the macrocosmos in pathology

In our time the investigations in this direction had commenced, first without regard to pathology Pasteur had detected the origin of fermentation due to microbes, destroying the physical contact-theory of Justus von Liebig But Pasteur declared, fearing to oppose the dominating school of pathology, that these discoveries had nothing to do with pathology When later, in the seventies, he transferred the germ theory to pathologic questions, he had to suffer many persecutions, as I know from his own mouth

Already, many years before Pasteur recognized his error, the parasite of anthrax was found by two German observers (Pollender and Brauell), but were, by all leading men, declared as inorganized, or if bacterial nature was conceded, as consequent to the disease or organisms developed in the dying animal

A sort of madness seemed to have controlled the defenders of the old doctrine, so that even the excellent experiments of Davaine did not change the minds of stubborn *doctrinaires* Davaine isolated these organisms and showed that a single one was sufficient to infect and kill an animal The development being first local, at the place of implantation, and the general infection could be prevented by destroying or extirpating the infected part

Lister developed the same idea, the external infection in wounds, and commenced a reform in surgery, which was more and more refined and perfected later

At the same time I demonstrated the propagation of certain bacteria in the internal organs of the body after they had found entrance through natural openings or through wounds The abundant material of the Franco-German war of 1870 gave me the opportunity to show that these organisms, while spreading in the organs, always precede the cellular derangements Cultures and infection of animals in these and other cases of infectious diseases showed the causal nature of, probably, all contagious diseases By separating the bacteria from fluids, in the cultures, by filtration, we could demonstrate that only the bacteria produced the disease It was shown by Tiegel, my assistant, and later in Tokio, that the fluid had only toxic influences (1871 to 1873)

I also was very vigorously attacked from all points, especially from the medical side, whereas other learned people, such as Tyndall, were convinced of the importance of the new development in pathology Certainly many imperfections, unavoidable in a new research, may have given some reason for criticism The later researches of Robert Koch and others decided the battle on the fundamental principle in pathology This can be pronounced in the following thesis *Disease is the struggle of two organisms the one invading the other*

If I have explained my opinion clearly enough you will see what can be done for scientific medical education By my lectures, which I will give in this college, I will attempt to inspire the student to do original work, which is the only way to promote the scientific standard

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ORIGINAL ARTICLES

A MEDICAL ASPECT OF CRIME

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8, 1896

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Aside from the uncivilized barbarism that would induce a barbarous or half civilized person to commit outrages on the individuals of a neighboring tribe or state while practicing obedience to his own tribal laws, there are exceptions in which the individual is not true to his own tribal or state laws These he continually violates, through some unknown impelling force that makes him act in utter disregard of the good, safety and comfort of all This latter violation is usually called crime

Now in all the mutations of the silent revolution that has wrought so wonderfully since the debut of an organized Christian civilization, we have room for so many different phases of a variation of progress that we have amid a high Christian civilization, great irregularities in which individuals are untrue to their assumed, acquired and inherited responsibilities and obligations, and tend frequently or constantly to violate those laws, written and unwritten, which are for the good of all, both living and unborn Besides this variation as between civilization and barbarism as to the highest types of that which we may call tragic crimes as between nations, there is quite as much variation or want of consistency in our civilized Christian and free country between communities and states What is a crime in one state or city is not necessarily such in another What is a crime in one section is not in another, and some things that are a violation of law on one day in the year or week is not on another Amid this almost inconceivable and inscrutable maze of varying conditions, individual and collective, local and general, we are called on in this ASSOCIATION, established for the well-being of society, to discuss the Medical Aspect of Crime

As far as the discussion in this paper is concerned it shall be based on the fact, that the brain and the nervous system are the physiologic organ of the mind and intellectuality, and that every grouping of ideational activity, or well defined mental faculty has its origin in the functional activity of brain or nerve cells and fibers, either local as in areas, or disseminated throughout the nervous system, or both local and disseminated, and that *morality*, the ethical sense, the sense of moral uprightness, of justice, of right between men, people and things, has such an origin, that it is a faculty of the mind just the same as the will of the reason, and that as such it is subject to the same laws as the functional activities of other organs that it is susceptible of being cultivated, of being repressed, of becoming increased by education and activity, of being diminished by neglect and occupation, of being perverted as in diseased conditions manifested in a class of criminals, that it is deficient in many persons to a greater or less degree In other words there are children, youth, adults and mature persons who are moral imbeciles from congenital deficiency of the moral sense.

This faculty of moral sense or morality is the inhibitory faculty of the mind, the let or hindrance to the human expressions, activity and conduct, modified by the will, the reason, the judgment, the understanding and the impulses and intellectual delusions

This faculty of morality is the latest and best results of man's long continued culture and its exercise is the highest function of his very complicated cerebral and nervous mechanism

With this physiologic source and condition of crime before us its treatment is greatly simplified When amid the mutations in progress of development from barbarism to civilization and advanced christianization, influenced by atavism and connation the impulse to commit an act is felt that belongs to the criminal calendar, that is, to do that which is in disregard of the rights of others and is hurtful to the well-being of the civil social compact, and is in violation of law written or unwritten, the individual sense of justice and moral uprightness intervenes and inhibits or sanctions the act, just in proportion to the development of the moral faculty of the individual

Now, would you have crime lessened? Then you should cultivate and develop the moral sense and repress the emotions I can not give here a tithe of all the details this cultivation would embrace, but certain it is that some code approximately correct should be formulated and put in practice expressly for this purpose Something that would teach children as definitely to exercise the moral and ethical faculties as there is to teach the exercise and development of the reasoning and intellectual or mathematical Children should be taught as early as possible *that there is a principle of right and justice in the abstract*, irrespective of any mere religious sentiment or superstition Each child ought to be impressed, if in no other way, by mere precept in a round of words, that he who has not an average moral perception is a moral idiot and is to be held in apprehension as one unsafe to trust Lessons in morals ought to be formulated and a spirit of emulation engendered that would cause them to strive with each other to learn the most of them These lessons should be elementary and advanced and graded in adaptation to the ability of each child to grasp and comprehend them *And every school of whatever character*, should be required to rigidly teach them, *for the exercise of morality, to the extent of being just and upright in conduct and character, is the best and highest function of the human brain* In this course each crime should be designated and its heinousness expatiated on and a thorough understanding of its turpitude required, and that its commission and practice would lead to still further immoral practices in the individual, propagate the same or similar practices by inheritance to others *And over all this ought to be held* the *terror* of *lawful punishment* For he who can not or will not learn, let him be deterred by fear of pain and penalty and let the seal of disapprobation be placed on every act that violates the least of the moral code

This much should be done for the individual from childhood up, and should not be neglected, and whatever religious influence that may be deemed proper should be added If anyone can be deterred from criminal or immoral practices through fear of impaired *future* happiness, by all means give him enough to answer the purpose It is the practicing that cultivates more than the mere tendency inactive

At present the public schools in our country, through which most of this grade of work in moral culture must be done, is incompetent for the task There is among school teachers as well as among the laity in general no definite idea as to the difference between morality and religion, between moral uprightness and the mere ritualistic processes of a beatific worship

I once had occasion to investigate this subject among public school teachers in my own State, and I dare say they average with those in other States Some said morals is a theological question, and if we attempted to teach it in schools it would give rise to religious sectarian wranglings that would impair the harmony and usefulness of the school, and if this or that teacher inculcated his or her moral ideas (religious views) it would create dissension and independence among the patrons of the school because of their varied religious beliefs One who was in high esteem as principal of public schools said in substance "that the question of how to promote the morals of my pupils has given me a great deal of anxiety and is a matter I never felt satisfied how to manage, owing to the varied religious views entertained by my teachers and pupils I have in one school a class of six or seven studying natural sciences, two members of which are believers in the theory of evolution, and it gives me a great deal of annoyance and anxiety for fear they will ruin the morals of the remainder of the class and in fact infect the whole school" Other teachers replied to my queries that they would leave the question of morals or religion to the Sabbath schools, the churches, the sectarian schools and the colleges There were still others who frankly admitted that the question of teaching morals was not well understood and criminally neglected

Now, I do not think I misrepresent the great body of divines and religious instructors, including all denominations from pope, priest, bishop, theologic professor and clergyman to pastor, when I say that they are not more systematic and definite in their conception of in what moral uprightness consists and how crime is to be prevented

Nor has the legal profession elucidated and proposed a better plan than the hurling of statutes and sentences of punishment Now, what shall I say of the medical profession? Have we elucidated any better or well devised method of defining morals and cultivating the moral sense? In fact I doubt not that when this point is discussed that it will reveal quite as wide a range of different ideas as to the moral sense and faculty of the brain and mind as the classes to which I have referred

But having to do with the brain as an anatomic organ and its physiologic phenomena, the mind in the abstract, it is our incumbent duty to determine whence the source of criminality in the individual as far as his mental composition is concerned and what additional plans shall be formulated for its prevention The conclusions arrived at on this point shall constitute a basis for the consideration of the medical aspect of crime

The moral defect with its criminal tendencies is always congenital, many times hereditary and always modified in a greater or less degree by *environment* and *synergistic influences*

By *congenital* I mean the inborn tendency, which mental condition is a derivative complex, much like a double decomposition in chemistry, and by which a mental composition is transmitted congenitally that is unlike either parent in moral perception, yet like one or the other, or both in many other respects This is *congenital* moral imbecility, while an *hereditary* moral imbecility must be like one or the other or both parents

The congenital variety of mental complex is that in which criminal children are born of amiable parents, or amiable children of criminal parents Many instances of both varieties I have observed

Having established in a fairly plausible way that the tendency to crime is inborn and consists in a defective mental composition in which the moral perceptions are weak or deficient and that it may be cultivated like any other mental faculty, it may be well to consider some one or two conditions of environment or synergistic influences that coöperate with a slight or marked criminal tendency to make the criminal To a large extent all men are creatures of association or environment Many with only slight tendencies are schooled out of or away from crime While many are schooled into it who but for such synergistic influences would have always remained guiltless

Beyond these suggestions I would be recreant to my trust were I not to arraign the liquor traffic as being the greatest despoiler of human morals and well being While we do in our associated capacity much to school children and youths out of and away from crime, yet we tolerate and perpetuate a traffic that unschools and dissipates much that our well designed efforts have wrought The use of alcoholic beverages is always to degrade and debase the moral sense in the individual and disorganize society It never elevates or cultivates a moral sense, but degrades and tends to make criminals just in proportion as it is used It never sent a child to Sabbath school but has sent many to the penitentiary and the gallows If a man uses a thousand barrels of it, it does not do him as much good, based on his necessities, as the eating of a teaspoonful of meal

Its tendency to produce crime and make criminals can be proven by the history of any county in the United States where the sale and use of it has been prohibited for only one year, for just in proportion to the efficiency of the restricted sale and use of the beverage among the citizens will crime and criminality have been diminished

I do not think that the destruction of the liquor traffic would by any means prove a panacea for all crime, but its synergistic influence amid a degree of moral imbecility is at the present time greater than all other influences combined

Some eminent medical gentlemen have argued that some one or more organic instincts are responsible for most all the crime, and that a surgical procedure or operation would prevent crime and reform the criminals The most remarkable contribution to the discussion of this character that I have seen is a paper by Dr Robert Boal to the Illinois State Medical Association in 1894, entitled "Emasculation and Ovariotomy as a Penalty for Crime and the Reformation of Criminals"

The discussion was made under nine considerations which were practically these

1 "We are taught by both physiology and psychology that all human beings are controlled in their conduct and actions and appetencies are expressed

through their organic instincts Of these two are of paramount importance They are love of life and sexual love The first is the strongest and outlasts all others Next is love of sex, which dominates human conduct and desires Its bestowal was wise, but when uncontrolled it is potent for evil "

2 "The greater proportion of the crimes characteristic of the criminal and vicious classes may be traced directly and indirectly to the influence of this uncontrollable and dominating sexual love The rapes, homicides, suicides, defalcations and embezzlements may be ascribed either directly to sexual love, or to influences associated with it So well is this understood that when we hear of the cashier of a bank absconding with its funds, or a trusted clerk robbing his employer and betraying his confidence, almost the first comment heard is, 'Oh, there is a woman in the case' With scarce *an exception*, there are few vices in the calendar of crime, licentiousness, prostitution, intemperance, gambling and others that are nameless, that are not designated, associated with and maintained by sexual love "

3 "The physical or structural characteristics of the criminal and defective classes are produced, reproduced and multiplied, and perpetuated by intermarriage or sexual commerce of persons of like defects, and we have accordingly the results of living activities of matter or what is called heredity "

4 "By the imposition of the penalty of emasculation and ovariotomy we destroy the capabilities of these defective criminal classes, to inflict injury upon society, thus depriving them of the power of reproduction "

5 "For the purpose of intimidating others from the commission of crime, while neither cruel nor vindictive it is more terrifying and repulsive, next to death, than any or all modes of punishment The loss of sexuality as a mark of manhood is so utterly abhorrent to all men that it would be avoided if possible by all individuals *not hopelessly insane* "

6 Practically, "By unsexing all constitutionally depraved convicts we would curtail such production and aid nature in natural selection and the survival of the fittest "

Seventh and eighth considerations are conclusions based on the acceptance of the six preceding referring to the results and effects of emasculation and ovariotomy on the disposition of the individual, and that as a punishment would not excite revenge, etc

Ninth consideration is a general *statement* as to range of application of the punishment, to the effect that it might be safely applied to insane persons, cranks and paranoiacs

To this ninth consideration I have only to ask, Would emasculation and ovariotomy change the delusions of the insane and make them safe citizens at large in society? I have quoted these 'Considerations" because they embody an idea that is held by many both in the medical and legal professions I think the idea is untenable as a whole I discussed them in a paper before the same society a year later, when I replied to the "Considerations" seriatim In the discussion of this paper Dr N S Davis of Chicago, said, "I have seen nothing in my observations in human society to make me believe that human depravity is greatly ruled by simply the sexual *organs* in either sex That they are capable of exerting a predominating *influence* in individual cases, as much and probably a great deal more owing to bad training, bad education, bad surroundings than to any inherent vice in these organs, is undoubtedly true, but whether they have any more tendency to produce crime than a man's stomach I very much doubt I think it has been shown that a well developed dyspeptic is about as likely to go wrong as almost any other class we might enumerate It is not, in my estimation, the fault of the organs that we propose to *excise* as much as it is a fault in the brain that accompanies them, and if you want to get rid of the tendency to crime you will have to excise some of the cells of the brain, if you can find the proper ones, instead of the sexual organs "

THE PHYSICIAN AND THE CRIMINAL

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga , May 5-8 1896

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The axiom that the proper study of mankind is man has evidently not long been applied to criminal man, for careful search reveals a striking dearth of records in this regard Until 1841 nothing worth recording had been done in the *special observation of criminals*, and the science of criminal anthropology, strictly speaking, was only begun in 1854, and not until Lombroso's work "The Criminal,' was published in 1876 did criminal anthropology assert itself as an independent science

There are several instances where observations have been published as to the characteristics of criminals, but no connected and definite work was done (*Immediately after the publication of* "The Criminal," however, *numerous works on criminal anthropology were published, especially in Italy*) All the valuable work done in this line is of recent date, good literature in this field is therefore limited and carries with it the conclusion that the whole subject has been surprisingly neglected, and he who would enter this field of work must find himself somewhat lonely On every hand, however, there are evidences of an arising interest in this feature of social life In France, Germany, England and Italy more especially, criminology is fast assuming the dignity that rightly belongs to this important and essential science In our own country, however, no such concentrated results have obtained, and the study of criminal man is a slighted one and the subject little understood More striking is this when we consider that such study is not without necessity, for a glance at the census figures of the United States will show a proportionate *increase* of incarcerated criminals of nearly five times from 1850 to 1890 inclusive

Year	Prisoners	Ratio of population
1850	6,737	1 in 3,442
1860	19,086	1 in 1,647
1870	32,901	1 in 1,171
1880	58,609	1 in 855
1890	82,329	1 in 757

The number of homicides in 1889 were 3,567 in the United States, in 1895, 10,500 This, too, in the face of the fact that society and the courts and general public sentiment has constantly grown *more* lenient, and the number of unpunished criminals has largely *increased*, as for instance, according to Andrew D White, if the whole number of murderers for the six years last past were in prison there would be 40,000, as a matter of fact there are only 7,300 Neither is it because we are unaware of the existence of crime, for it is everywhere present, the newspapers of the day flaunt it in our faces, and our own observations make known to us the existence of a large criminal class, which is surely and rapidly invading every department and function of our social and political life. It is not necessary to enlarge upon this unpleasant feature, it is apparent to every one. The condition confronts us, it remains to determine the causes and apply the remedy, and that without delay. These causes are many and various, but it will only be within my province to speak of those which relate to us as a profession more particularly, and seek to determine just what our responsibilities are in this whole field of scientific and sociologic work.

It would seem that a common interest in the study of man in a biologic sense would have elicited the very best efforts of the medical profession, inasmuch as man has always been the humble recipient of all the experimental work of an aggressive profession since its conception, but that such has not been the case is apparent by the very few medical men who have been engaged in this important branch of science. It may be assumed that this was chiefly due to the fact that in the early history of medicine, the profession of that day were so intent upon the problem of cure, a—to them—much more important consideration than man himself. In a less remote period medical men were engaged in the elucidation of theories, and still more recently earnestly in pursuit of man's common enemy, the microbe, not that this work has not been necessary, and of inestimable value to a common progress, but it does seem paradoxic that its prosecution should have so completely obscured its object, man!

Only occasionally had the physician devoted himself to this work up to the time of Sampson, Lombroso, Forbes Winslow, Camper and Lallemant. It is, however, in our own country that the least attention has been paid to this subject, excepting in isolated cases where men like Drs. Arthur McDonald, Jacobi and Flint, and physicians connected with penal institutions have urged the necessity of criminal anthropology as a branch of medical work. This has been, however, so fragmentary and unclassified that it has not assumed at any time an organized effort in this direction, and therefore has elicited little interest and accomplished less, but the rapid advance in this work recently made in Italy, France, England and Germany, and the alarming ascendency of crime, so diametrically opposed to the progress of our time, the inability of our present administration of the law, and of the penal system to cope with the necessities and conditions of the hour, have forced into consideration of society and government a problem which should have had its solution, or at least intelligent recognition, as paramount to their safety and well being long ago. As it is in the closing years of the nineteenth century with all its marvelous achievements, with all its progress in culture and refinement, society finds itself confronted by a condition which threatens its very existence. Society is finding out that it has nursed or tolerated within its own bosom the upas which may poison it to death. Aroused to a recognition of the fact that such a condition exists, it finds itself in possession of only the crude elements of an embryo science, which to be adequate to these demands must be rapidly developed into one, comprehensive and efficient. Crime and the criminal must receive more weighty consideration by all concerned, or the integrity and strength of our social and political institutions will be subjected (they are already threatened) with serious disaster therefrom. Society has heretofore been content to relegate this whole feature to the courts and the penal code.

It needs no demonstration to show that the modern trial, sentence and punishment of the criminal, so largely based upon assumption and in ignorance of the criminal himself, has measurably failed to protect society from the rising tide of crime. In spite of the exercise of their powers crime has continually and markedly increased. This is in the largest sense due to the fact that the procedures of the courts and administration of law, have based their action upon the theory that its function was first to detect crime, and then to punish it, losing sight of the fact that all men are not alike, and that punitive measures could only be efficient when they take into consideration the individual characteristics and apply the treatment to the criminal's special needs. Intelligent trial and sentence can only be secured when we have a scientific knowledge of the criminal, the nature of his crimes and the natural and social phenomena connected therewith. Such an administration of criminal law can only be obtained by the thorough classification of the criminal into distinct and characteristic types. In the words of Flint. "Before a disease can be treated intelligently it must be diagnosed."

More especially is this true when those types represent physical and psychic anomalies.

I think, in the light which recent investigation has shed upon this subject, that it may be indisputably asserted that crime is often the natural outcome of disease, and that into such causation enter many forms of deviation from the normal standard in both the physical and mental organization represented by arrests of growth, deformities, asymmetries, intercurrent diseases, as well as psychic aberrations and disorders.

This whole subject is at present in a state of chaos, and it is impossible to draw definite conclusions from the data at our disposal, naturally enough as the possibilities of this field have opened up to view, there has dawned upon the consciousness of some the idea that there is such a thing as a natural criminal, and that the commission of crime is not always the result of a long process of evil doing, instituted by telling the first white lie, which precedes the going through of the story book stages of moral decline which go to make up the average romantic criminal. This conception leads them to come hastily to conclusions based upon a few meagre details and incidents and with many learned phrases rush into print seeking to establish the theory that society has made an awful mistake, and assert that crime is and always has been a disease. A great deal is said upon the subject which clearly shows an utter lack of knowledge and a misconception of the whole subject.

All this grandiloquent flourishing of pamphlets and inclination to rush in where wise men fear to tread might well be expected with reference to a science of less than half a century's growth, neither is this limited to the over-enthusiastic for even our most careful students and painstaking observers in the enthusiasm of first discovery have made many erroneous statements and drawn conclusions altogether too arbitrary, but when all this cyclonic agitation of high sounding terms has ceased to confuse our senses, we shall see that these conditions are but the natural accompaniment of the birth of a new science, and that soon from out all this incoherent mass of nebulistic data will be crystallized constructive elements, which when assembled by the skillful and competent men of our time, will constitute a perfected science of criminal anthropology, applicable to the needs of society, and protective of the general welfare In the study of the criminal there has been a tendency to base all conclusions upon anthropologic data, even Benedict and Lombroso have gone so far as to assert the existence of a criminal brain as a distinct type, which I think is unwarranted by what has been derived from still later investigation To these extreme views I certainly do not assent, for in the words of Jacobi, "The criminal can not be considered an entity but as a being possessed of characteristics as various as those of other types of men," neither would I go so far as Rondeau when he states that "all assassins are patients as are all other criminals ' I do not believe that all criminals are diseased in the common acceptation of the term, nor is all crime the result of such disease

Many criminals are diseased and present anomalies of structure as the cause of crime there are however criminals who are so from environment, and from the inhumanity heaped upon them by men There are also criminals of circumstance or accident Neither do I believe that the rogue can be told from the honest man by the shape of his head alone, or by his physiognomy, or the deformity of his jaws, ears, nose, or lips or by any other one of the numerous anomalies we find in all types of mankind, and especially in the types representing the lower strata of society, neither have we as yet the data representing the normal type of man, with which to compare the abnormal[1] When we have we can make more positive statements It is only by the sum total that an exact estimate can be made that is by a careful consideration of all the anomalous conditions which are grouped in and about the criminal, physically, psychically and socially, and a balance struck between abnormal tendency and inhibitory power that a correct conclusion can be reached It is the preponderance of tendency which must determine the character of the individual There is however abundant evidence and well established data to show that crime is largely the natural outcome of disease in the perpetrator, and that by comparison with other men, the criminal class shows a preponderance of anomalous conditions, as for instance, in one of Lombroso's tables of the measurements of the skull we find "that men with normal skulls were three times as numerous among soldiers as among criminals Of men with a noteworthy number of anomalies occurring together, out of 711 soldiers there are only three or four, there were three times as many amongst criminals as amongst soldiers, and there was not one soldier of the 711 who showed an extraordinary number, say five or more," and the same is true of physiognomic, psychologic, and physiologic anomalies amongst criminals

As a rule special anomalies do not necessarily indicate special tendencies to certain crimes, but as stated in my paper, "Shall Insane Criminals be Imprisoned or Put to Death?"[2] in the examination of several thousand criminals, I have been lead to believe that, as a rule, when in the inherent criminal the right side of the cranium, that is, indicating the right hemisphere of the brain in excessive development over the left, especially where there is a marked fulness over the paracentral lobe, the possessor's impulses lead toward homicide I have repeatedly been able to place my hand upon this part of the head of criminals, and designate their crimes to be either assault or homicide without any previous knowledge of their history or themselves

More recent observations have substantiated the above, especially the last criminal executed at Clinton Prison for an unusually unprovoked and brutal murder, the right side of the brain weighing more than the left

"To the student of criminal anthropology, however, every characteristic in the criminal's natural history has an anthropologic, physiologic and psychologic value in itself, and must be a technical study,' that he may arrive at a correct conclusion as a whole, therefore it is not altogether from apparent anomalous conditions alone that he would assume that the man presented a criminal type, or was criminally diseased, for crime is often due to intercurrent disease, especially to chronic diseases of the heart, meningitis, tubercculous disease, and syphilis, criminals are especially prone to diseases of the heart Out of 2,011 men examined by myself in a general way on admission into prison, 239 had gross heart lesions, and many more obscure and less important ones I should estimate that 25 per cent of all criminals would show disease of the heart or of the great blood vessels When we consider the relation of the heart to the circulation of the blood in the brain, we shall understand how a diseased heart can produce brain disturbance Meningitis is also a prolific cause of crime, especially those of assault and homicide, this is particularly noticeable in the latter It is not necessary for me to refer to the maniacal tendency due to inflammation of the meninges Any one who has conducted a patient through the several stages of a meningitis, knows well the effect of the disease upon the mental condition The result of meningitis is often a thickened patch, a softened area, or a circumscribed adhesion, any one of which is capable of driving the unhappy possessor to the most fiendish acts of violence, as the spur to the horse, it urges on the diabolical impulse In autopsies upon criminals who had committed assaults or homicides, it is very seldom, if ever, that some such thickened patch or atrophic area has not been discovered In my last case the adhesions were extensive M Dally, from a twenty years' experience, says that "all criminals who have been subjected to autopsy after execution gave evidence of cerebral injury, often undiscovered prior to autopsy ' From my own experience I believe this injury is usually the result of some form of meningeal inflammation Syphilis is well known to cause grave neurosis, and among criminals a very large percentage are syphilitic The effects of syphilis upon the brain, either in the deposit of gummatous tumors, or in the production of degeneracy of brain tissues, is a prolific cause for mental disorders, especially of a temporary nature I have seen a number of criminals who were, no doubt so, from the effect of syphilis, or its injudicious treatment Tuberculosis is also a prime factor in the problem of crime Many a man is a criminal because of the presence of tubercular toxins circulating in his brain, or to the poverty which this inability to earn his livelihood brings him Almost every physician is familiar with what is called the insanity of phthisis Several other diseases are distinct causes for crime, especially those connected with the genito-urinary organs

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[1] It is encouraging to know that there is a decided movement in the endeavor to establish a normal structural gauge for men by the use of instruments and technical observation

A large amount of data might be offered which would go to establish the fact that a large proportion of crime is the direct and natural outcome of some form of disease I shall not enter into detailed minutiæ or technicalities, neither shall I weary you with an array of craniometric figures and anthropologic data, for such information is best found in the works of Benedict, Lombroso, Lacassagne, Ferri, Ferrero, Garofalo and Dugdale, but simply attempt in a general way to institute a discussion of the relation of the physician to the criminal problem I shall also purposely avoid the sociologic aspect only in so far as is necessary to define this relation

If it be conceded that crime is the result of disease we shall have a conception of the criminal, which at once changes the whole application of the principle of treatment, revolutionizes sociology and annihilates many of the more primitive methods of the administration of so called justice Surely all efforts should be directed not toward inflicting upon an already unfortunate individual still greater misfortune, but in assisting him to overcome his infirmity Now if this was true of all criminals, and if the question of degree did not enter so largely into the problem, the whole matter would be simplified, there are, however, questions of degree and questions as to what proportion of crime is due to disease, recognizable and estimatable Herein lies the opportunity for the exercise of large common sense, and in the consideration and treatment of the whole subject, let us be guided by it

Much confusion arises from false notions as to what the criminal is Too often the criminal is considered an abstract quantity, as if belonging to a different order of beings, such is not the case however, they are men and women, creatures of hope, of longing and of fear Our ideas of the criminal should not lead us to think that the mere fact of putting a man behind the bars and habilitating him in stripes, at once assigns him to a different species, for it will be found that the criminal is much like other men, amenable to treatment and improvement The distinction which criminologists would make in the theory that the criminal is of degenerate type, does not apply to the incarcerated criminal alone, but also applies to millions who have never seen the inside of a court of justice, or felt the dampness of a prison cell There is no distinction from a psychologic or physical standpoint between the incarcerated and the unpunished criminal, other than the results consequent upon his environment

It is because the conditions which enter into the criminal make up that lead to the commission of crime are not better understood, and the naturally fallacious conception as to what the positive school of criminology advocates in the scientific treatment of crime, that efforts looking toward the improvement of our methods of treating the criminal are so fruitless The positive school of criminology does not desire to divorce the criminal from his responsibility to the law, or mitigate the punishment of crime, which is its inevitable auxiliary, it proposes to punish crime, not, however, in a retaliatory or vengeful way, but, in so far as is possible, use its punishment as a means of restoring the offender to his former rectitude before society and the law, recognizing "that crime is not always of the free will, but rather a natural phenomenon which can only disappear when its natural factors are eliminated" It seeks rather to adapt measures to conditions rather than attempting to make conditions fit measures, and recommends a plan of treatment based upon the classification of the criminal resting upon scientific anthropologic data

Equally fallacious notions are entertained as to what is the part of criminal anthropology in the scientific treatment of the criminal The modern criminologist does not seek to base conclusions upon anthropologic data alone, but as Ferri puts it "All that he seeks of anthropology is this—Is the criminal, and in what respect, a normal or an abnormal man? And if he is abnormal is it congenital or contracted, capable or incapable of rectification?" This is all, but sufficient to enable the criminologist to come to positive conclusions covering the measures that society can take to protect itself against crime This then is the summing up of the whole matter 1 A correct and efficient treatment must rest, as in all other departments of human affairs, upon the proper classification as a primary and essential step to proper observation 2 That such classification to be of value must rest upon anthropologic data 3 Inasmuch as anthropology is scientific and positively medical, the essential work of classification naturally falls within the physician's province, and can alone be performed by him

Not only is the object of classification to admit of a more intelligent study of the criminal, but it is through such classification alone that proper treatment can be administered

The classification of the criminal also predisposes the necessity of proper classification and grading of penal institutions, so that when the criminal has been assigned to his class by the courts, he can receive the treatment best suited to his individual requirements, the insane or weak minded criminal should be sentenced to a hospital for the care of the insane, the born or habitual to an institution specially calculated to care for confirmed and incorrigible criminals criminals of passion and occasion, to short term institutions where they could receive treatment looking to their reform To accomplish this all of these institutions should be graded to facilitate their special study and treatment The criminal having in him the possibilities of reform should have opportunity for such reform The confirmed and hopeless criminal should be excluded from society permanently This phase of the criminal's treatment is more explicitly treated of in my pamphlet published in November, 1895, "The State and the Criminal"

Having been properly graded, every institution devoted to the care of the criminal should be provided with a physician specially qualified not only for the proper care and treatment of the ordinary ills of the criminal, but abundantly able to conduct a proper study of the criminal based upon anthropologic data and criminologic factors Not only will such efficiency ensure proper grading and intelligent treatment of the criminal, but it would furnish to the science of criminology valuable data upon which to base still further conclusions The first step in the classification is the appointment to every criminal court of a competent physician to assist the court in determining expert questions relative to the criminal's physical and psychic condition at the time of trial

The physician in this work of classification should bring to his aid all instruments of precision necessary to the proper measuring and estimating of the criminal from this standpoint such as the sphygmograph and craniometer[3] This would only apply to cases not having been previously examined and recorded

First in the proper classification of the criminal is his division into two great classes, curable and incurable, in so far as results are concerned, this covers the whole ground, but that such a division can be correctly made, necessitates the classification of the criminal with reference to his type, especially in the application of treatment to that numerous class of curable criminals I have therefore adopted as a most useful classification that of Ferri, which divided the criminal into five classes, to wit 1 The insane criminal 2 The born criminal, 3 The habitual criminal 4 The occasional criminal, 5 The criminal of passion

It will be found that this classification meets the largest requirements possible under our present knowledge, but unmixed types of criminals are unknown and criminals can not be precisely classed under certain categories for they frequently exhibit mixed propensities, and merge from one type into another And in one some of the characteristics of several types may be blended This classification, however, is a practical one and based upon sound observation

The Insane Criminal —There can be no scientific distinction made between the criminally insane and the insane criminal The distinction is only an associate one and refers to conviction True criminal science knows no distinction between the incarcerated and the criminal at large To him the abnormal condition which controls a criminal act, constitutes the criminal identity The courts have shown their utter inability to differentiate between the insane criminal and the ordinary If a man has within him a tendency sufficiently strong to cause him to commit offences against person or property, he is a criminal, and if such depends upon an abnormal mental condition, he is an insane criminal, the only distinction necessary to make is in a penologic sense, and that is the distinction between the insane convict and the insane criminal The question turns upon the point of insanity related to responsibility under the law To be able to distinguish between the born criminal with abnormalities of structure and psychic disturbances, and the insane criminal, is sometimes a difficult thing to do, and I can not agree with those who deem it an easy matter to decide, so intimately mixed are the inherent tendencies and anomalous conditions present in the two types, so frequently the same conditions are manifested in both that it is sometimes very difficult but not necessarily impossible

Garofalo's distinction is a good one, and is applicable to a large number of cases He makes the distinction, 'with the insane criminals, that in the act itself lies the satisfaction, not the object, while with criminals the act is only a means to an end" To the former crime is a pleasure, to the latter a paying business necessitating, it may be, disagreeable acts

Criminals of unsound mind can not all be classed in the same category if we are to study them intelligently indeed, it is difficult to make a classification which is always distinctive

For my own convenience I subdivide insane criminals into five classes

1 The paranoiac, who are persons exhibiting self exaltation, systematized progressive delusions, writers of insane political documents, and with tendencies toward political homicides which are usually consistent with their delusions Guiteau and Prendergast are good examples of this class

2 The psychic epileptic A class not numerous and who commit the unexplainable murders This class of criminals commit outrageous murders during epileptic seizure, and which seems utterly inconsistent with the circumstances and the perpetrator, and can not be judged by the ordinary psychology of criminals (Ferri)

3 The phrenasthenic or psychopathic criminal, who is one of irresistible impulse, feebleness of will, and with morbid tendencies to private murder This class of criminals commit atrocious crimes, apparently without motive and purely from the force of impulse, or from the satisfaction of the criminal act itself Good examples of this class are Jack the Ripper and Mrs Halliday

4 The morally insane or reasoning phrenasthenic The only difference between the morally insane or reasoning phrenasthenic is the absence of delusions, and their perversions are of the sentiments and affections (Regis) "They represent a small class and are the individuals who apparently with full reason and judgment commit themselves in an unconscious and frequently paroxysmal manner to indulge in errors of conduct and immoral acts which are really pathologic, and although apparently less insane they are more profoundly degenerate than the delusion cases, and have a more marked degree of mental infirmity and imbecility '

The fifth class of insane criminals "consists of a large body of persons tainted by a common and clinic form of mental alienation, all of whom are apt to become criminal This class of insane criminal are sometimes identical, and sometimes opposed to the born and occasional criminal" (Ferri) This class commit various crimes under insane impulses and are commonly degenerates It is seldom that a criminal of this class commits an atrocious crime unless under an impulse of passion

These classifications are more a matter of convenience and should not be arbitrary, practically, the whole importance of the determination of the criminal insanity or sanity devolves upon the question of responsibility, and classification is only useful in arriving at correct conclusions as to the individual's responsibility under the law

The Born Criminal —The born or instinctive criminal is one who most frequently presents anomalies of organization and psychic aberration, they are criminals the same as other men are mechanics or artizans, and look upon the penalties of crime as the natural risk incidental to the business, who do not regard a crime from its moral aspects, but simply from the risks attendant upon its execution The born criminal as a rule is deficient in both moral and physical sensibility This criminal insensibility is manifested in his perfect inability to see the evil side of a criminal act, and to forecast its effect upon himself as a moral entity, also in his indifference to consequences and to feelings of remorse He plans and executes with the whole moral code left out, only as it is used to escape the penalty which may deprive him of the exercise of his craft

The lack of physical sensibility is often marked

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[3] The time will no doubt shortly come when hypnotic suggestion and the use of special instruments for the measurement of brain impulses, as related to physical conditions will be added to the physician's armamentarium

My attention was first called to it particularly while doing operations upon this class of men, they exhibiting no evidence of pain even though the operation might be painful and to the normal person excruciating One man attempted to castrate himself and when discovered had succeeded in exposing the testicle, having opened the scrotum throughout, and was about to cut the cord This same man under a previous operation for ligation of the radial artery had shown almost perfect insensibility to pain Another case was that of a man about 30 years of age, in good health classed as an ordinary convict, quite inoffensive, but who was drawn into an altercation with a fellow workman in the repair shop, and who in a fit of rage walked deliberately across the shop to a small circular saw, threw on the belt, and without hesitancy placed his forearm upon the carriage and sawed it completely off just below the elbow joint He seemed perfectly indifferent to the whole affair and to suffer no pain He was discharged from prison, was again incarcerated, is now serving a second term and is still considered an ordinary convict Numbers burn themselves in a most horrible manner to get rid of doing a moderate task, cut off their fingers and mutilate and injure themselves in different ways to carry a point, not because they could endure pain heroically, but simply because they had learned that these things did not hurt them overmuch This insensibility to pain tends to rapid healing of their wounds There is, however one erotic type of born criminal who is over-sensitive to all sorts of pain and suffers exaggeratedly from the slightest injury This moral and physical insensibility at once places the possessor in a low order of organization and one largely incapable of reformation or improvement From this class will always come the major portion of incorrigibles

The Occasional Criminal —The occasional criminal presents rarely marked anomalies of structure such as characterize the born criminal This type are more criminals from environment and circumstances, and do not present those anomalous conditions that bring them properly within the province of a medical study, they are therefore best left to the sociologist, only in so far as individual cases present psychic and physical diseases requiring medical treatment

The Criminal of Passion —The criminal of passion is one of irresistible impulses, who under the stress of uncontrollable passion commits crime of which there has been no premeditation, and for which he suffers the keenest remorse "He is usually strong enough to resist ordinary temptations, but does not resist psychologic storms which are sometimes actually irresistible" They are of highly neurotic type, and their study is of interest and consequence to the physician in that they approximate criminals of unsound mind, and it is often a question to determine as to the sanity of their acts They are not criminals in the true sense, but rather offenders, victims of their own impulses

We come now to consider the physician's relation to the criminal as regards his treatment The complete study and treatment of the criminal must ever be largely a sociologic one As has been said by Lacassagne "The criminal is a microbe inseparable from his culture broth the social surrounding" And gradually but surely the purely anthropologic study of the criminal has given place to a plainly more sociologic one based upon it

The treatment of acquired and intercurrent disease of the criminal falls almost entirely within the field of labor of the physician to penal institutions and should embrace in its operations all of the medical, surgical, mechanical and therapeutic means at the disposal of the physician In the treatment of heart lesions so numerous among criminals, both gymnastic exercise and proper medicaments should be used

For syphilis, constant specific medicaments and operative procedures should be used, and the same in meningeal lesions Tuberculosis rigid isolation, with the destruction of the bacilli by every modern means, and climatic influence should be a part of the treatment The various manifestations of psychic disorders and abnormalities should receive generous treatment by means of spray baths, surgical shock and electricity At Clinton Prison, New York, all these therapeutic means are in active operation with beneficial and successful results Aside from the treatment of the physical ills mentioned, it is with the insane, the born and weak-minded criminal that the physician will have the most to do in the treatment of psychic disorders and the development in him of the power to control brain impulses

The treatment of the insane criminal falls entirely within the sphere of the State Hospital for the Insane The chief office of the physician with reference to the insane criminal is his classification and isolation This function as now exercised is chiefly directed toward the examination of the criminal when accused of crime, and is a medico-legal one, and one which is not to the credit of our profession, which I set forth in a paper read before the Medical Society of the State of New York in February, 1895 "Shall Insane Criminals be Imprisoned or Put to Death?"

I am pleased to be able to state that there is a good prospect of remedial legislation in my own State regarding the exhibition of medical expert testimony in all criminal trials

It is not, however, so important to the protection of society that the insane criminal receive just and equitable treatment in courts of justice, as it is that he be apprehended before he is able to accomplish the execution of his delusional impulses It is the apprehension and detention alone that can protect society from their depredations Had Guiteau and Prendergast been apprehended, both Garfield and Mayor Harrison might still have been alive

We should urge the passage of such laws as would tend to place some competent medical officer in every community as having the right of surveillance with reference to this type of mankind

In the treatment of the born and habitual criminal, the first object should be to increase inhibitory power The will may be said to be the gateway of the mind, and through its narrow portals pass impulses for good or evil, wise or foolish, and it is the exercise of this faculty that must control the tide of psychic impulses that seek to find passage to the outer world Since inhibitory power is the essential factor, the cultivation and strengthening of this power should be one of the chief objects of treatment in the weak-minded and degenerate criminal, the exercise of certain brain functions over and over again constitute a habit of action which becomes routine and natural If the will is to be strengthened and habit broken, new tracks of association fibers must be brought into play, dormant brain cells stimulated into activity and the whole current of thought and cerebration revolutionized This can only be accomplished by some sudden shock, either physical or mental

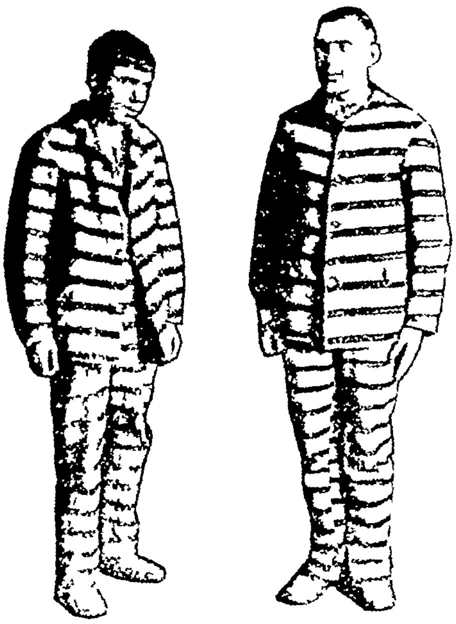
It is a well-known physiologic law that by severe mechanic shock we can suspend the function of cell groups, partially or entirely It was to this principle of shock that were due many beneficent effects from the use of the more primitive forms of physical punishment in corrective institutions It is a well-recognized fact by penologists that the shock attendant upon corporeal punishment has often resulted in the cure of certain psychoses Many a man has been converted from an intractable crank on the border line of insanity into a tractable and useful one

I find this view is substantiated by the figures relative to the commitment of insane convicts to the State Hospital for Insane convicts, which, prior to the abolition of corporeal punishment in the prisons of the State of New York showed 00874 per cent and since its abolition up to the present year 01764 per cent, or more than double the former percentage While these figures can not be relied on as alone affected by this change, they are sufficiently indicative of the relation existing between the two, since apparently the contributing circumstances would rather tend to lessen the number of commitments than to increase them I am not using these figures for the advocacy of corporeal punishment, but simply to show the influence of shock in preventing mental disease In the application of all the forms of shock the effects are produced by the pedagogic impression made upon the brain, which in the class of criminals under consideration is always weak and incompetent, and whose brain cells respond more readily to stimuli applied through physical sensation

In a paper read before the Medical Society of the State of New York upon craniotomy in idiocy, in January, 1895, Dr Charles L Dana attributes the benefits derived from operations upon the skull for this condition as due chiefly to what he terms "Surgico-pedagogic influences" My own experience has substantiated this view with reference to weak-minded and degenerate criminals My attention was first called to this in observing that in certain cases where criminals had been severely handled in fights, and where the shock was considerable, and especially when associated with extensive scalp wounds, that these men usually became more tractable afterward and evinced marked changes in many ways during the remainder of their incarceration

In several of these cases there was an almost complete turn about in the disposition and psychic condition This led me to investigate, and I found that by freely cutting through the scalp down to the bone, and raising the periosteum, still greater improvement followed I have now begun a series of operations upon neurasthenics and weak-minded criminals April 1, of this year I operated upon a young man, aged 22 years, serving a first term in State prison Operation for relief of neurasthenia and excessive masturbation Patient was extremely nervous, sleepless, despondent and apparently becoming demented The hair was closely shaven, and under antiseptic precautions the operation was performed as follows Two horse-shoe incisions were made five inches in length, one on the right and one on the left side of head, one and one-half inches from the median line at the apex of the cranial arch The periosteum was cut cleanly through, and separated from the bone for a distance of about one inch all round the incision, grooves were then cut in the bone, but no bone removed, the wound was packed with iodoform gauze and dressed ordinarily The wounds were then packed loosely until they healed by granulation No sutures were put in The effects of this operation were like magic, the young man improved in every particular, slept well, appetite improved, figure became erect, took on flesh rapidly, circulation improved, and his whole aspect was very much more vigorous The habit of masturbation was entirely relieved I show you photographs of the young man before and fifteen days after the operation Prior to this I had circumcised him, and used all other means at my disposal to effect the cure of his habit with negative results (This operation is also beneficial in meningeal inflammations, and also with thickened and adherent scalp areas) This principle has for a long time been recognized in isolated and incidental ways, but never to my knowledge has it been understood thoroughly or applied in any systematic manner

Here is a wide field for study and experiment, and I believe that much can be accomplished in the treatment of this class of criminals by the application of some form of shock I am contemplating the construction of an electrical apparatus, which will produce the maximum amount of shock and physical impression with a minimum risk of injury Any means by which powerful influences can be brought to bear upon the subject will offer the best and most favorable opportunity for improving the patients



Before operation After operation

J R, Aged 22

The treatment of the occasional criminal, and the criminal of passion does not require special enumeration

The application of scientific principles of classification and treatment of the criminal considered from a sociologic standpoint, is one fraught with difficulty and we need not flatter ourselves that apparent good results will come quickly or that the way is easy, the duty is plain however and we must walk therein It has ceased to be a matter of choice and we must be equal to the responsibilities which this new field of action enforces Already in the half century of its life, the science of criminal anthropology has recorded brilliant achievements in the accumulation of invaluable data and the elucidation of many valuable truths These achievements have come largely through the labor of medical men, therefore the soundness and efficacy of this relation of physician to the scientific treatment of the criminal can not be doubted, nor that it falls properly within the medical province, for if we interpret aright the significance of the astonishing developments of our time and note correctly the movement of modern medical thought and action, we shall come quickly to the conclusion that the field of medical work and practice is rapidly widening and that its mission can no longer be so entirely restricted to the narrow limits of the treatment and cure of disease, but more to its diagnosis and prevention, and its future accomplishments must comprehend much more that appertains to the safety and welfare of the people Through the gateway of laboratory work in our own profession, and the investigations of the correlative sciences, a great flood of light has come, old systems are breaking up, relations are changing, new adjustments are in order, the X rays alone is likely to revolutionize the whole rationale of diagnostic, *prognostic* and operative procedure He who shapes his course by the experience of the past alone will soon find himself deprived of the needful appreciation of an enlightened public The profession must take to itself larger spheres of action, must extend its powers, must put itself in harmony with new conditions, its relation to society and the community at large must be better understood The physician is to become a mentor to the people, and his efforts like those of his time must look to the improvement of mankind, not in the concoction of monstrous formulas, or in the combination of nauseous decoctions, but in his knowledge of the causation and the exercise of his powers in the prevention of disease and the general guardianship of the home, the individual and the public So far as this function has been exercised it has accomplished much good and has been of incalculable benefit to society at large, in the protection of our shores from pestilence, our municipalities from infectious diseases and the securing of abundant *opportunities* of health ful living the labors of our profession have been untiring, fruitful and reassuring

The opening of this new field of criminal anthropology and sociology, embracing the type study of man, and the resolving of society into its respective classes offers equal opportunity for the exercise of high and noble powers

It is only through the exercise of such a prerogative that the physician can sustain the position in which the evolutional processes of scientific progress have allotted to him, and he will only rise equal to the dignity of this requisition when he shall have assumed the rôle of a competent student of the bio psychic principles and elements which enter into the different types of criminal man, and society be enabled to protect itself against crime, a protection too long and entirely entrusted to the offices of the penal code

DISCUSSION ON PAPERS OF DRS CORR AND RANSOM

Dr D R Brower—In Illinois, our State Society and our various local societies have, during the past two or three years, had this question before them on various occasions, and what is true of the State of Illinois is true of many of the other States The question of crime is not a legal question it was until twenty five or thirty, or possibly forty years ago, a purely legal question, and to day in its practical application it is a purely legal question, but in reality it is a medico legal question, and, as a consequence of the utter failure of the law and the church to stay this criminal procession, we have the results, the vast, marvelous, everwhelming increase of crime The only thing that can possibly stay this great increase is for the medical profession to step to the front and teach the intelligent laity that the care of the criminal is as much a medical as a legal question There are some things that study of this question has satisfied me as being established 1, the increase of crime, 2, we state as the cause of this increase of crime a vicious parentage, bad environment, alcoholism a constant increase in the urban population and last, though not least, the *unreasonable manner* in which the laws are administered, 3, that the habitual criminal is an abnormal man, which is shown physically by asymmetry in cranial cerebral development and in physiognomy, as well as by anomalies, in physical sensibilities and in motor activites One of these anomalies does not make a criminal man, but in the habitual criminal these abnormalities are present in a vastly greater amount than in any other person in the community There are psychic abnormalities manifested by a moral sensibility This is most mani*fest and* almost universal, not limited to the moral criminals, but prevailing throughout the whole great class, leaving out the few who are classified under the occasional and passionate criminals There is a lack of forethought with them, they live simply in to day And there is a low grade of intelligence, a prodigious amount of vanity, and an emotional instability The practical part, upon which the laity must be intelligently educated, is what to do with them—how to treat them The question is a medico legal one, and the doctors must come to the assistance of the church and the law The social and bio logic condition of the person, and not the accident of crime, should determine the degree and kind of punishment As our laws are adminstered to day, if the theft is a trifling one, the punishment is but slight, if the amount taken is a large sum, the punishment is accordingly great The reference is not to the criminal, but to his crime, whereas the crime is a mere incident, as the theft was $5 because there was not $5 000 to steal The measures that are to counteract crime must be, not according to the crime itself, but to the condition of the criminal

In my studies of this question in the institutions of my own State I found a woman who had been sentenced to our *Bride*well thirty times She should have been sentenced but once, and the county of Cook would have been saved the expense of twenty nine arrests, trials and imprisonments, while the community round about her would have been saved a great deal of perplexity and considerable destruction of property She had upon her, as plainly marked as any habitual criminal ever had, the physical and psychic stigmata of degeneration

It is this unreasonable administration of our laws that has probably more to do than anything else with this marked increase in crime I would like very much, if it is practicable, to have attached to every court some person who is skilled in criminal anthropology who can aid the court in determining what the sentence shall be The rule that has been adopted in some of the courts of Illinois so far as the reformatory institutions are concerned, has been that of indeterminate sentences, and consider this is a much better plan If the indeterminate sentence should be applied to all criminals, and the investigation of the anthropologic condition of the criminal made *in the* institution to which he is consigned, vastly more beneficial results would *follow* than by his investigation during the trial

It is by indeterminate sentences that I think the matter can best be settled The only trouble in the State of Illinois, so far as the reformatories are concerned, is that the maximum limit is not enough in every instance In the next place a very serious interference with the suppression of crime is placing the pardoning power in the hands of the governor It should rather be placed in the hands of a *commission* skilled in the subject of criminal anthropology

The plan of disposing of these criminals just before and during the trial is a mistake These supposed criminals are sent to a common jail and the associations of that jail are vile, and the man who has not yet been declared a criminal by the law is there thrown into contact with confirmed criminals This is very wrong There should be established in every community detention places where there can be a separation and isolation of these criminals awaiting trials, and then, when the sentence comes, there should be three classes of institutions to which these people are consigned A reform school for the juveniles, reformatories for the curables, and penitentiaries for the incurables

Some of our laity think that this medical disturbance in the matter of crime is for the purpose of relieving criminals of the penalties of crime Such is not the case First to protect the community, first to see to it that these criminals, once arrested, should be kept in custody until they are cured, that is the most important point

It is only through such societies as this, through medical men and women, that the laity can be educated up to a proper appreciation of this great question We are going through now precisely what was gone through at the beginning of the century, or a little before, in the matter of insanity, when that was divorced from the custody of the church and the law

We are to day pupils in this work of reformation, and very soon the same results will be accomplished with reference to the care, treatment and the cure of these criminals—probably not to the same extent, but similar results will follow as have been seen in the care and the cure of insanity

DR JOHN PUNTON—There is no doubt that there is a great lack on the part of both the medical and the legal professions in failing to handle these cases properly These changes which are proposed, however, would mean an entire subversion of the constitution of many of the States of the Union, in other words, the present status of the legal adjustments of crime would be undermined and that is a very large matter for the medical profession to undertake to do I am in the main in favor of the reforms outlined, and just in proportion as we agitate this matter we are aiding not only the legal profession but also the community in which we live

DR CAMPBELL—That law and the church have failed to repress crime is well known, it is now proposed that we of the medical profession shall take hold of it The alarming increase in crime is known to us But I do not entertain any sanguine anticipations of the doctors doing much more than the church and the law have done, if so much This great increase of crime can not be attributed to the causes that have been assigned to it, so far as I have heard here to night We have always had bad education, syphilis, alcohol, bad inheritance and bad environment In my opinion this great increase of the criminal class is owing to the advance of our civilization, the increase in the species, the growing stress that has been brought to bear upon the means of gaining a livelihood These forces are irresistible They will continue, and crime as the result of them will continue, and if all these admirable suggestions are carried out, I doubt if 5 per cent of the crime will be stopped

DR POWELL—I think the commission of experienced men would be a very desirable thing to have

DR QUINBY—If we study the results of imprisonment, we see the victim, instead of being benefited by punishment, made worse by it This is due to the method and management of our criminal jurisprudence A young man who was well disposed, whose environments were correct, whose education was proper, whose bringing up was right, but who became involved through alcoholism, was thrown among the class of hardened criminals when arrested, and from that hour, he was kept there six months for some slight offense, he has become a degenerate man He told me that his barbarous treatment during his confinement is what sent him downward Now, could that man have been arrested and treated somewhere instead of being thrown into prison, if we could have institutions for treatment, not simply for imprisonment, the results would be different

These are all abnormal cases They are sick, and how do we treat them—as mentally and physically defective? No Cruelly, inhumanely, putting them with criminals, into the charge oftentimes of men who are themselves brutes

The criminal classes in this country are largely increasing, and something must be done to stop this increase The church is not in a condition to do it, because these individuals are sick people, defective physically and mentally, the power of alcohol always having a tendency to destroy will power, hence, the physician is the proper man to give advice

DR BISHOP—We feel a little sensitive when the preacher and the public blame us about things, and we are in the same position exactly when we blame the church and the community We are part of the church, or should be, we are part of the community, and as citizens we are responsible There is a great deal of hypersensitiveness on the part of our good friends who believe that these criminals as a rule are defective It seems to me that very often they are liars

I think a slight change in the law would be of advantage, on the basis of sentencing to prison for a determinate period, and if at the end of that time they were not cured, and still unfit for freedom, to keep them in prison for an indefinite period until they showed that they were fit to be released

It is an outrage to send men to prison and have them resort to all sort of crime that it is possible to do inside those walls, and then set them loose on the world at the end of the time for which they were sentenced The mistake is that they are not made to feel that they can gain something by improving

There is no question that men are morally deficient as they are mentally and physically lacking, and the proper place to treat them is in some school for development

DR CORR—The question is how to prevent crime, how to prevent the young person who starts out with a small degree of tendency from cultivating that tendency and from becoming a criminal We must improve our society so that we do not have any of that class born Dr Ransom has classified crime very finely, but we want a classification which shall tell us how to prevent it Now, if it be true that the conduct of people is guided and inhibited by the moral sense and that is a faculty of the human mind that is capable of cultivation, I ask you to formulate some plan by which this end can be accomplished

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THE PSYCHOLOGY OF NARCOTISM

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY W XAVIER SUDDUTH, A M, M D

CHICAGO ILL

Nature intended that man should be a comfortable animal and enjoy to the full the fruits of his labor

Man has ordered otherwise, and as a consequence in the receding days of the nineteenth century, when art and intellect have reached their highest development, we find man, born to be the favored creature of nature, laboring under self-imposed burdens of society, oftentimes heavier than he can bear As a natural consequence of his pernicious environment he is frequently found seeking surcease from the pains of existence in self-immolation, temporary intoxication or suicide, the method adopted depending much upon his belief in a future state and his relation thereto

What are some of the steps that have operated to bring about these deplorable conditions? They can not be laid to natural causes because there has never been a time in the history of civilization when the actual needs of man were to be satisfied with as little expenditure of vital force as at present The cause of the stress of the age must therefore be looked for, not in the physical, but in the psychic domain of man's nature, and it is to this phase of the question that I desire to call your attention to-day

In that degree that man is able to perform the necessary duties of life by force of habit so does he lessen the labor of existence The hardest work man has to do in this world is to think Every psychosis has its neurosis New experiences or acts are successfully mastered only by the expenditure of thought The greater part of the absolutely necessary acts of existence are performed by rote rather than by thought Thought labor requires nerve action, just as surely as locomotion incurs muscular activity, and while it is true that there is a marked physical difference between mental and muscular action, yet physiologically considered they both express a condition of catabolism that has to be met by metabolism Ordinary cell wear is not necessarily painful On the other hand, a certain degree of pleasurable exhileration accompanies most necessary bodily functional activity When, however, exercise is carried beyond a certain point, so as to become forced, it soon becomes painful When weariness ensues as a consequence of functional activity, pleasure ceases and pain begins Pain is the absence of pleasure according to our major premise laid down in the opening sentences of this paper, and if this be true, then its abolishment does not consist in self-immolation, but in a readjustment of our relation to our environment or its more or less complete reconstruction

Pain and pleasure are not distinct physical conditions, no matter how intimately they may appear to be related, but mental states, and therefore require careful consideration to differentiate them Pleasure and pain are often so closely connected that it is with difficulty that they can be separated Not only this but the terminology used to express the two conditions is inextricably confused Many people are said to "cry for joy " In fact, so narrow is the division line between the two conditions that the scale turns upon the mental state of the individual at the time of experiencing any particular sensation, as to whether he suffer pain or feel pleasure The close relationship between them is thus shown by a case in which the one merges into other Continuous stimulation that at first gives pleasure, in time becomes painful This leads to the conclusion that only a certain amount of pleasure is bearable by human nature, if furnished without intermission The system may be surfeited by pleasure as well as borne down by pain But what is it that suffers? Surely not the physical that alone experiences wear No! Pleasure and pain are not conditions *per se,* but mental perceptions of sensations experienced at the time or revived from some previous experience, through thought images brought before the mind by association of ideas Then again, not only does pleasure easily merge into pain but the very absence of pain to him who has suffered, is a pleasure The fullest appreciation of the pleasures of existence are to be had by comparison with painful experiences happily passed While many of our joys and sorrows are the result of purely physical sensations, yet a considerable proportion of our pleasures and pains are intimately associated with our emotions and are distinctly dependent upon the peculiar physical condition in which the experience finds us Many of the acutest pains of existence are those of restriction Man longs to be free, to cast off the burdens of care, for even a short space of time, to secure a respite from the pains of existence—to lose himself hence his resort to the use of narcotics Sad delusion! The greatest slave of all is he who seeks his freedom in these deceptive agents Nine out of ten narcomaniacs will tell you the some story, when asked as to how the habit was formed "I took it to relieve pain,' "to drive dull care away," "to get a little rest, ' and thus the chains of habit were forged

Dr Carpenter says, "that our nervous system grows to the modes in which it has been exercised " That is only another way of putting the fact that we develop along the lines of least resistence, according to the bent of our special inclinations, limited and modified by our peculiar environment Habits are more easily formed in youth than later in life, by reason of the fact that the organism is in the formative stage and the inhibitive feature of the will is less developed than it is later on If a young man or woman reaches the age of twenty without having acquired any vicious habits of thought, action or appetite, ten to one they will go through life free from contamination Nevertheless, physical states of weakness later in life seem to unman the individual and reestablish, to a greater or less extent, the conditions prevailing in adolescence Drugs that may be given during the crisis of a disease with impunity, if continued during convalescence are apt to give rise to drug habits, hence the necessity of discontinuing the use of stimulants and narcotics during this stage of the disease and depending upon a nutritious diet and natural remedies to bridge over this critical period when the will is weakened and the moral faculties seem to be more or less clouded

Narcomaniacs may, for convenience of study, be divided into three classes

1 Those who have acquired the habit through hereditary tendencies, and who find in the use of narcotics a physical pleasure

2 Those who, though physically strong, yet are *led into the habit by social customs as the result of* environment

3 Those who turn to narcotics for relief of the pains of existence

The psychologic bearing of the several classes is essentially different when laboring under the spell of the drug Members of the first class have, in most instances, the warning example of degenerate ancestors, yet so great is the demand of the system for sedation that they brave the dangers and public opinion with a brazen effrontery that is many times astonishing They have no desire to reform and their course is continuously, progressively downward With them there is no shadow of turning They are wholly given over to evil ways and the sooner they end their days the better for themselves and mankind at large

The second class, considerably larger *than the first,* much larger in some countries *than others,* suffers mostly *from the direct effect* of the drug because removed from the moral stigma under which other classes labor While its members are seriously handicapped in the battle of life yet they manage to preserve a tolerable existence unless the particular narcotic used happens to be hasheesh or opium, and even against the latter the natives of [illegible] seem to hold a more or less charmed existence

It is to the third class, however, that I desire to call special attention, because they are those who dwell among us Our fathers, mothers, brothers, sisters and friends Brought to their condition of enslavement many times by circumstances over which they have no control, held accountable by an highly intellectual and moral civilization, they suffer, not only from the direct effect of the drug used, but from the goadings of an outraged moral nature The members of this class, oftentimes forge their chains through years of petty indulgence in the use of the milder sedatives and narcotics Their case then is one of slow growth and needs to be studied from that standpoint A diseased condition of the will is established, in which the individual finds himself unable to stand out against what he knows to be sin against the physical body It was not always so there were times when, in the early history of the case, had he had the right kind of treatment, he could have broken the bonds of the growing habit with comparative ease These diseased conditions of the will form most interesting psychologic studies and promise to throw much light upon the rationale of treatment In the main, an entirely erroneous idea of the function of the will prevails Most persons consider it as a direct motor force only, confusing it with volition, which is the act of the will, and thus overlook entirely its inhibitive aspect In one sense the will may be said to be dual, but in any event it represents a state of the mind, and is, according to James, " a memory of past acts " Its parents are desire and feeling and its offspring are represented in such mental states as " I wish," "I will" and "I will not, ' which latter is many times synonymous with " I can not "

In order that feeling and desire may become motor impulses, they must be accompanied by a knowledge of the attainability of the object desired, otherwise a utile or even no effort is made to attain the object desired We thus observe the difference between "I wish" and "I will" and note that faith is one of the principal attributes of a strong will The inhibitive spect of the will which enables its possessor to say no is largely a matter of education Uncivilized man knows no master, save want, and when opportunity or indulgence offers, gives full reign to his unhalowed passions The tendency of civilization is to teach the control of the passions through the limitations of environment Man thus learns to inhibit his desires and hold in check his feelings through the inhibitory action of his will He is thereby enabled to contain himself within the bounds of decorum and decency It is by will power that man is an abstemious animal and when given over to indulgence he is simply evidencing the atavistic principle which so often crops out during the evolutionary process Civilization teaches man to "wish" and to "wait" for many things in this life, upheld by the hope of their fulfillment in some future existence, if not in this, and also that by restraining his passions and appetite he is serving his own best good

Continued indulgence in the use of narcotics finally creates an appetite Like a bad debtor, they promise much and pay little The system continually cries out for relief that comes not This irresistible craving is intensified by moral or physical restraint and the habitue is urged on by his vitiated appetite to greater and greater indulgence when opportunity offers No feat is considered too dangerous to be attempted to secure the coveted dram, no human tie too sacred to prevent the fulfillment of his unhallowed desire, even hope of future salvation is freely given up for the cup that cheereth but to damn The intensity of the passion for narcotics when once the habit has taken hold upon its victim, points only too plainly to something essentially different from a mere physical appetite Hunger for food, even unto starvation, shows no comparison in its suffering to the agony of the alcoholic inebriate or the opium fiend when deprived of his wanted potion Everything points to a diseased mental state beyond the power of any drug to reach it as an *antidote* While drugs play an important role as alteratives and tonics in the treatment of inebriety yet there is not a "cure" in existence, that has any efficacy, that does not base its permanency upon the "suggestive" methods employed in effecting the cure While it is true that some depend almost entirely upon "drug suggestion" yet the cures that promise most in permanency of results have incorporated in them a system of psycho-physics, using the term medically, that is successful in proportion as it is scientific and comprehensive

Inebriety, in all its forms, is beyond question a neurosis and permanency of cure depends upon establishing an absolutely altered mental state, together with the maintenance of a healthy environment until such time as the individual has fully regained possession of his will, and developed sufficient moral stamina to withstand the temptations of the open saloon and social life

100 State Street

FEIGNED INSANITY, REPORT OF THREE CASES

Read in the Section on Neurology and Medical Jurisprudence, at the Forty seventh Annual Meeting of the American Medical Association, at Atlanta Ga May 5 8 1896

BY WILLIAM FRANCIS DREWRY, M D
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The simulation of insanity is not an innovation peculiar to modern day schemers, though it is now frequently resorted to by designing criminals

In the sacred writings is recorded that the Shepherd King of Israel "changed his behavior and feigned himself mad and scrabbled on the doors of the gate, and let his spittle fall down upon his beard" because he was "sore afraid of the king of Gath "

In order to escape the Trojan war, Ulysses feigned insanity by plowing the sea shore and sowing salt instead of corn And Lucius Junius Brutus, it is said, played the imbecile for a purpose

To detect simulation and to establish the requisite proof of it, have at all times been matters of more or less difficulty Casper met with many cases of the sort and appreciated the difficulties which they presented Says Hammond "No one, no matter how skillful an alienist he may be, is beyond the point of being imposed upon for a short time by persons assuming to have certain forms of mental derangement" Snell remarks that if a simulator preserves a complete passiveness and an obstinate silence, it is not impossible that insanity may be so perfectly simulated that detection may not be accomplished Connolly Norman regards the question of simulation of insanity as " one of the most difficult with which alienists have to deal, one requiring much experience, acumen and sagacity, if a satisfactory decision is to be arrived at"

In his work on "Sanity and Insanity," Mercier says "There is no form of insanity that may not be simulated by a case of drunkenness, and when it is not known, from other sources of information, that these manifestations are due to drink, no expert in the world, however skillful, could distinguish between the insanity that is due to alcoholic poisoning, and the insanity that is due to other causes"

Tardieu and others think, however, that nothing is more difficult to counterfeit than mental disease and that the attempt to deceive may be easily discovered by a careful observer Conolly asserts that he can "hardly imagine a case which would be proof against an efficient system of observation"

When we remember that, besides the fact that scores of criminals resort to the insanity dodge to escape merited punishment, the truly insane sometimes simulate insanity that simulation itself may be an indication of mental alienation, and that occasionally there is a tendency of feigned insanity after long duration to become real insanity, the question of accurate diagnosis may not always be unattended with uncertainty and embarrassment To an experienced alienist there will of course seldom be any great difficulty in arriving at a correct conclusion, but to one with more or less limited knowledge of the various manifestations of mental diseases a clever imposter, with the faculty of imitation well developed, would appear somewhat in the nature of a psychic problem

At all events, before giving a positive answer to so delicate and important a question as whether one is insane and therefore entitled to all possible humane consideration, or sane, and consequently responsible for his illegal acts, a physician should study methodically and scientifically the suspected case, keeping his conscience pure and undefiled under all circumstances "His opinion," says an eminent authority, "should be founded upon the conception of pure knowledge, based upon observation and induction"

The question of disease—that and nothing more—is the one for the physician to determine Is the person whose legal or testamentary responsibility is in doubt, *insane*—is his mind affected by *disease?* That is the problem the solution of which devolves upon the physician Says Bucknill "The element of disease in abnormal conditions of mind is the touchstone of irresponsibility and the detection of its existence or non-existence is the peculiar and oftentimes the difficult task of the psychologist"

So, view the matter in any way you will, it can be only a question of diagnosis

Case 1—In February, 1895, Isaiah P was indicted on the charge of house-breaking and larceny While in jail awaiting his trial in the hustings court of a Virginia city he suddenly began acting so strangely that doubt was entertained regarding his mental condition Upon being arraigned in court his behavior was so utterly at variance with that of an ordinary sane man, he was remanded to jail and the trial of his case postponed, so that his mental condition might be investigated

The writer was appointed by the judge to ascertain whether or not the prisoner was insane Whereupon I visited him several times, dealt with him not in the rôle of a secret detective, but in that of an impartial physician, and as such proceeded systematically to inform myself as fully as possible of his history and symptoms

History and heredity—Isaiah was born in 1857, of negro parentage There was nothing of special interest connected with his early life From childhood he was a bad, indolent fellow Only two of his family were ever afflicted with any form of neurosis or of psychosis His mother at 65, was sent to an asylum in a state of senile dementia A younger sister died of phthisis pulmonalis, complicated with melancholia, while in a hospital

During a spree some ten years ago (1886 I think), Isaiah received a blow on the right side of his head which produced a depressed fracture but under careful surgical treatment he made a complete recovery, the only visible result remaining being a slight depression in the cranium On more than one occasion he was suspected of larceny, and finally, in 1888, was convicted and sentenced to five years in the State penitentiary

It was claimed by his family that he had had, since the blow on the head, several epileptic fits and been at times "curious in his ways" But in the absence of corroborative evidence these statements were accepted with a degree of reserve

Appearance and symptoms—A careful physical examination revealed nothing of special pathologic import His bodily condition was about normal

He came into my presence with an air of exaggerated excitement, moved about restlessly, took no notice of his surroundings, looked wild and uneasy talked incessantly and foolishly The almost exclusive subject of his foolish, incoherent gibberish was "locusts" He talked about locusts most of the time, but when questioned he gave answers foreign to the subject of his apparent or assumed delusion, saying he did not understand what I meant All questions were answered very slowly and hesitatingly When I told him my business his incoherence and restlessness became intensified When unobserved he became quiet and composed

Odd sensations in his head were frequently complained of He would put his hand to his head and say something was "scrambling about in here"

Memory and intelligence, to all appearances, were absolutely lost Apparently he recalled nothing that had ever happened, nor did he remember any person or place he had ever seen He could not or would not distinguish one piece of money from another, nor tell a man from a woman

To every question he gave a negative or an absurd reply For instance

Question Where were you born? Ans Caught ninety-nine locusts to day

Ques How do you feel to-day? Ans Eat locusts with butter

Ques Let me see your tongue Ans Hold up his foot

Ques Did you sleep well last night? Ans Tell him all right Here they come

Ques Tell me about the locusts Ans Had bread and shucks for dinner

Ques But what of the locusts? Ans I don't understand you

Ques How long has your mind been affected this way? Ans Some say 49 years, I say 100

Ques Have you heard from home lately? Ans Fell in river last night The locusts are [illegible] down the mountains Let them roll

He slept well several hours every night and frequently in day time after he had been [illegible] and [illegible] from constant exertion and excitement

I took occasion to remark in an undertone to the jailor, that if the patient were to sing, become noisy at night destructive to clothing, filthy in his habits, devoid of the sense of pain, my belief in his insanity would be confirmed A few days later Isaiah had become so noisy and filthy at night that he had to be isolated He had tried to be wakeful, but, negro-like, he soon fell asleep His clothes were torn, shoes thrown away, coat reversed, etc I thrust a needle into his flesh at various points, without making any perceptible impression Said he did not feel any pain at all A few minutes later, when a needle was suddenly stuck into his back, he forgot to be insensible to pain and consequently jumped some distance

My notes show many and various evidences of Isaiah's clumsy effort to "play crazy," but the above is quite sufficient to prove beyond any doubt, *simulation* I had no trouble in detecting the fraud

For two months, in fact, until the day he was taken to the penitentiary to serve out a twenty-three years' sentence, he continued his efforts to deceive Finally, however, he acknowledged the attempted fraud

In my statement to the court and jury I gave, in substance, the following as the grounds of my opinion

1 There was no prodromal stage of indisposition, malaise or depression preceding the sudden outbreak The "attack" occurred in the midst of normal health He had few symptoms of any form of insanity that might begin somewhat suddenly, viz transitory mania, epileptic mania, confusional insanity, acute hallucinatory insanity, alcoholic mania, none of which it is possible to counterfeit Then, the fixedness of the form of delusion he tried to imitate would exclude any of the above types of insanity

2 Sudden development of a fixed delusion regarding one particular subject is not consistent with the clinical history of any known form of insanity, for paranoia, *monomania* or delusional insanity, is of slow and gradual development and unattended with any special excitement, loss of intelligence, etc

3 If he were trying to appear a paranoiac or monomaniac, he overlooked many essential points, for instance, when questioned regarding his delusion, he invariably gave an answer entirely foreign to the subject, and the peculiarity of expression which so strongly marks that class of cases, was entirely wanting and, furthermore, there was no excitement or irritability of temper when contradicted

4 Loss of memory, reason and intelligence would occur in dementia, but the quickness with which he carried out my suggestions regarding the "lacking symptoms" of insanity, to say nothing about his appearance and general shrewdness, would preclude any suspicion of mental decay

5 Contrary to what is observed in acute mania and other forms of insanity, there was no sign of insomnia The more intense his restlessness, the more profound the sleep which followed

6 The hesitancy, extravagance and silliness with which he replied to simple questions, the absurd, disordered ideas which flowed slowly and thoughtfully would not be exhibited in the really insane, whose ideas form and flow rapidly, disconnectedly and are not devoid of sense

7 There were no physical symptoms upon which to base a diagnosis of either functional or organic disease of the brain The injury to the head had left no perceptible ill result, motor, sensory or mental

8 The insanity of his mother being a psychosis of old age, could have but little effect, if any, upon the offspring of her early life But the fact that she was insane and that she had an insane and phthisical child might be considered, in connection with the possible effects of the blow on the head, sufficient grounds upon which a neurotic diathesis or nervous instability might be based It is possible that in this case the head injury might have caused some moral deficiency

9 The order of development and the assumed symptoms failed to conform to the complete clinical picture of any recognized type of mental disease

10 The motive for feigning was not over-looked, though that was of secondary importance when compared with the history and symptoms of the case

Case 2 —Another instance of a criminal trying to escape the stern edict of the law by pretending to be insane, has lately come under my personal observation In this case, however, the ultimate purpose of the malingerer was accomplished

Isaac H , a negro youth, had served a few months of an eighteen year sentence in the State prison, for murder He assumed the rôle of a madman, and by taking advantage of the lax and crude method of adjudging one insane in Virginia, he succeeded in gaining admission to the insane asylum where no special arrangements are provided for the custody of insane criminals Every possible precaution was exercised to prevent his escape, yet Isaac, after a short sojourn, very ingeniously gained his liberty and has never since been heard of We had diagnosed the case correctly and were contemplating returning the prisoner to his legitimate abode I have not time here to make an analysis of the case Suffice it to say, he so far over-acted the part, and behaved so differently from any other case of acute mania—the form of insanity he was trying to counterfeit—the deception was too flagrant

The history of the case, the clumsy, over-acted symptoms, the motive, were all carefully studied, and by a process of elimination no type of insanity was left to fit his case In the words of the distinguished Dr Chapin, of Philadelphia ' The method of arriving at a conclusion is, bring together all the features in the history and manifestations of the case and then decide whether the case corresponds to a type of insanity, which in all of its features could not be simulated except by a trained alienist In this way a mistake will rarely be made "

Case 3 —Some years ago there was admitted into the Central Hospital a young colored girl, of intelligence above the average of her race, and with a physical formation well-nigh perfect Her case had been diagnosed "epileptic insanity "

It was some time before I had an opportunity of seeing her "in a fit" From the post epileptic condition I had serious doubt about the genuineness of the epilepsy Eventually I saw her repeatedly in her "terrible attacks," as her family had designated the seizures

She would cry out suddenly, then fall, snap her jaws together, make a noise like the bark of a dog, foam at the mouth and act most maniacally, etc Then she would pass into a convulsive state, jerk violently, tear off all her clothes, assume the opisthotonos position, grind her teeth, strike and snap at everything in reach, and finally pass into a quiet sleep These violent attacks would continue sometimes for an hour or two, after which the patient would become quiet and composed, her only complaint being that she felt sore Said she knew nothing of the attacks, when they came on or how they affected her, but expressed great mortification on account of her affliction

I noticed that the fall was rather guarded, that she never bit her tongue or hurt herself in any way, that the sphincters were never relaxed, that the pupils were in every way normal, the iris not insensible to light It was evident that sensory perception existed She became bathed in hot perspiration, and seemed to be well nigh exhausted

The assumed tonic and clonic convulsions were by no means like those seen in real epilepsy The post-epileptic condition she made no attempt to imitate

The girl was carefully nursed for some time, but after watching her curious maneuvers a few times, I told her that she was feigning and that the next attack she had I should put her in a room and pay no attention to her whatever My threat was promptly carried into execution, and the effect was all that could have been desired

She was soon sent home, got married, though has never had any children, and has ever since remained free from that 'epileptic insanity" which she palmed off so successfully on some of her friends for the sole purpose, as far as I could discern, of arousing sympathy There was, however, doubtless some hysteria in her case

That there is no established rule or test by which feigned insanity may be detected, but that each case must be decided upon according to the history and symptoms presented, can not be well denied Alienists everywhere, will bear me out in these assertions The individual whose sanity or insanity is being questioned should constitute the chief object of the investigation

Whenever there is doubt about the mental condition of one charged with crime, it would be well, for the court to select a committee of competent alienists to investigate the case and report in writing the result of their examinations and deliberations This need not preclude a cross-examination

In Russia and elsewhere methods similar to this prevail In some of the countries there is, I believe, a regular court physician who decides all doubtful medical cases It has been advocated in some quarters of this country that there be appointed State experts in insanity to act in all cases where an element of uncertainty exists

But the best plan, probably, would be to transfer the suspect to an insane asylum and keep him there, under proper safe-guard, for a specified time, in order that the attending physicians may determine the question of real or counterfeited insanity

For the reason that the position often taken by lawyers is so entirely at variance with the true conception of the disease—insanity—that medical witnesses, who have no special knowledge of insanity, are often called upon to give expert testimony, that physicians are sometimes utilized by shrewd counsel for partisan or for sinister purposes, that juries composed entirely of laymen are not competent to try a case which involves a question of mental alienation—brain disease—and finally, chiefly that the ends of justice and mercy are sometimes thwarted, our system of medical jurisprudence of insanity is in need of revision

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The increase in the membership during the month of September was very satisfactory Let the good work go on'

THE ACTION OF STRYCHNIN IN PULMONARY CONSUMPTION IN RELATION TO THE NEUROTIC ORIGIN OF THIS DISEASE

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY THOMAS J MAYS, A M, M D

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Freedom of thought is the foundation of all progress, and while this law develops a diversity of opinion in practical therapeutics so great as to give rise to the belief that no two physicians treat the same disease in the same way, it is nevertheless true that in the struggle to relieve and cure disease we consciously or unconsciously seek and follow methods which finally lead to adoption of the same principles if not of the same details of treatment This unanimity in practice is sometimes reached through certain etiologic and pathologic convictions which we hold of disease, or, as is more often the case, we are driven to it by the power which comes from witnessing the successful effects of well directed medication either in the hands of others or our own, and in spite of any theory we may possess in regard to the origin or mechanism of disease

For a number of years I have said and written much in favor of the neurotic origin of pulmonary consumption, and while this theory may not be perfect in all its details, I believe that it gives us a more rational explanation of the causes and nature of this disease than any other Not only do I feel convinced of this, but my experience assures me that the therapeutic measures which are directly addressed to the nervous system are the most effective in the relief and cure of this disease Led by these considerations I have employed a number of neurotic agents in the treatment of this disease, the principal one is strychnin, to which I shall now devote a few remarks

Of all the drugs in the materia medica there is none that compares favorably with the action of strychnin in the treatment of pulmonary consumption As is well known this agent has an elective affinity for the whole nervous system, but over and above this it possesses a special influence on the nerves which preside over the function of respiration Its action is reputed to be wholly devoted to the motor nervous system, but there is reason for believing that it also affects the peripheral sensory nerves In small doses it stimulates, in medium doses it tetanizes, and in large doses it paralyzes the nervous system The dose is a relative or a movable quantity however, for that which produces tetanus or paralysis at one time may act as a stimulus at another

How, then, does strychnin act in pulmonary consumption? It is taken for granted that the lung disease is merely a superficial manifestation of disorder of the pulmonary nerve supply Therefore the strychnin primarily raises the tone of the nervous system as a whole, and of the respiratory nerves in particular In this way it not only increases the resistance of the lung to disease, but it aids digestion assimilation and blood-building Let us say that the tone of the nervous system is depressed By employing strychnin we can do this but *must* be *careful to* avoid the danger point, yet at the same time this point must be approached as closely as is consistent with the safety of the patient The best way to bring about this object is to begin with a moderately small dose of the drug, 1-30 grain four times a day, give this for one week, then increase it to 1-24 grain for another week, during the next give 1-20 grain, the following week raise the dose to about 1-16 grain, and so on, making a slight increase every week until you observe nervousness, restlessness or twitching of the muscles—the signs of the beginning of strychnin intoxication In most cases these symptoms do not develop until 1-12 or ⅛ grain or even a larger dose is reached It must be understood that the drug is to be given in these doses four or even five times a day The object is to impress the nervous system with the full stimulant effect of this drug The sooner this end is attained the better will it be for the patient For this reason you begin with small doses and work upward as rapidly as you can with safety After the desired point has been reached the question arises whether it is better to continue the largest dose or to resume the original I think it best not to vary from this line during the remainder of the treatment, for you do not wish to lose what has been accomplished Keep the strychnin treatment up to the highest level of safety, but shun the point where its stimulus extends into the region of tetanus and of paralysis It is best, however, to reduce the dose somewhat at this point If, for example, it is found that ⅛ grain is a maximum dose reduce to 1-16 grain, gradually increase the dose again until ⅛ grain is reached, and then return to 1-16 or 1-12 grain After you have increased and decreased the dose several times you will probably find that ⅛ grain no longer produces any dangerous symptoms, and that you now can give as much as 1-6 grain When administered in this way the drug may be given for an indefinite period to the majority of phthisical patients

The remedial effects of the drug show themselves in various ways The nervousness, sleeplessness and pain in the chest will be ameliorated, and perhaps entirely disappear, the cough, expectoration and dyspnea will diminish, vomiting will abate, the appetite improves, the patient gains in flesh and color, the weak and rapid acting of the heart will become slower and stronger the red corpuscles increase in number, and the patient becomes more hopeful and brighter

Of all the drugs in our possession strychnin makes the most profound impression on the nervous system, and in my opinion yields a larger measure of benefit in the treatment of pulmonary consumption than can be derived from any other single agent In connection with it I employ well regulated rest, good food, quinin, phenacetin, hypophosphites, electricity, cod liver oil, etc

I will not weary you by relating any examples from my experience in confirmation of what I have said,[1] but will quote in part a "case of phthisis apparently cured" which was reported by Dr William Pepper in the December (1895) number of *The University Medical Magazine* Female, aged 21, with a decided phthisical family history, began to emaciate rapidly in March, 1893 In less than a month she was bedridden and weighed 100 pounds She had high fever night sweats, anorexia, vomiting, copious expectoration and all the physical signs of pulmonary disintegration She received an egg albumin diet and the medicinal treatment consisted of 1-100 grain of strychnin nitrate with 1-1000 grain of atropin sulphate every two hours hypodermatically, and 1-50 grain of strychnin nitrate with 1-12 grain of the double chlorid of gold and sodium and ½ grain of a vegetable digestive every two hours by the mouth After a few days the amount of gold and sodium was increased to ⅛ grain every two hours At first she showed signs of strychnin intoxication, and the amount was reduced, but she soon resumed the original dose, and after the first two weeks bore the drug well, although always just inside the border line of its toxic action During April she improved decidedly, and during May the improvement was also very rapid By the latter part of this month she weighed 125 pounds The abnormal physical signs and the tubercle bacilli disappeared and in September she weighed 132 pounds, and was in perfect health In August, 1895, she had a slight attack of pneumonia, after which all the symptoms she had two years previously, recurred, and her weight fell to 114 pounds She was placed on her former treatment, and made a rapid recovery On November 1 she again weighed 124 pounds, her cough and expectoration had almost disappeared No tubercle bacilli have been found since the previous October

Dr Pepper, in summing up the case says, that among its noteworthy points are the absence from the treatment of all cough medication and antiseptics, and the large doses of strychnin and the double chlorid of gold and sodium with which the system was kept literally saturated

There can be no doubt that this was an apparently hopeless case of phthisis from its very outset, and great credit attaches to the distinguished prescriber for guiding it to such a successful termination The question arises as to which of the agents played the most prominent rôle in bringing about this issue From my own experience with the drugs which were employed I believe that the strychnin is chiefly responsible for this, although in forming a correct estimate we must not lose sight of the value of the nutritious food and the physical rest

When we take into consideration that insanity, idiocy, hysteria, chorea, epilepsy, asthma and all forms of nervous disorder are prone to develop into pulmonary phthisis, that the former diseases are frequently converted into the latter through heredity, that all poisons like those of alcohol, syphilis, lead, mercury, influenza, whooping cough, etc, have the power of engendering nervous disease and pulmonary consumption, and as a matter of fact the former are often followed by the latter disease, and that the markedly beneficial action of strychnin in this disease comes exclusively through the nervous system, it does not require a very great stretch of the imagination to perceive that the neurotic element plays a leading part in the etiology of pulmonary consumption

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Perchlorid of Iron in Treatment of Ingrowing Nail—Reghi's method is being extensively quoted, as he has been very successful with it After soaking the foot until the scab is loosened and the pus washed off, a piece of cotton dipped in a 50 per cent solution of perchlorid of iron is inserted in the ungueo phalangeal groove, and the toe lightly wrapped up This is repeated twice a day, the blackish scab that forms removed each time The patient remains in bed a couple of days, and the cure is complete in twenty, although a small piece of cotton should be worn between the nail and the flesh for some time —*Bulletin Méd* , No 58

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[1] Also see 'The Strychnin Treatment of Pulmonary Consumption '—*American Medico Surgical Bulletin*, May 15, 1894

FUNCTIONAL DYSPEPSIA OF CHILDREN WITH ILLUSTRATIVE CASES

Read in the Section on Diseases of Children at the Forty seventh
Annual Meeting of the American Medical Association
held at Atlanta Ga May 5 8 1896

BY J M G CARTER, M D , Sc D , Ph D

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WAUKEGAN ILL

The term *dyspepsia* is so frequently used by writers as a synonym for indigestion that one needs to explain the meaning he attaches to the word In this paper it is to be understood as referring to the condition which permits or encourages acute attacks of deranged digestion or unnatural distress in the stomach or bowels from the presence or absence of normal food or its products The acute attacks of interference with digestion are here termed indigestion Frequent attacks of indigestion may occur in the course of a case of dyspepsia

Functional dyspepsia includes all cases which are not due to some organic lesion of the stomach Many cases of gastritis in children are sequelæ of indigestion and must be carefully differentiated from functional dyspepsia But cases resulting from undeveloped stomachs properly belong in this class From these limitations and explanations it may be seen that we include under the term functional dyspepsia cases which result from some congenital imperfection in structure, from improper food whether of quantity or quality, from variations of temperature especially increased heat, from the presence of bacteria or their products, from reflexes caused by diseases in other parts of the body, and from weakness following or accompanying general illness

Case 1 —I have lately had under my care a baby born before the termination of the eighth utero gestation month It was small and though perfect in limb and feature, had little vitality Its digestive powers were so feeble that its mother's milk caused it great distress The mother's milk ceased in a few days A wet nurse was secured but was soon dismissed because relief was not obtained and because the baby seemed to dislike the milk Cow's milk, diluted, raw or sterilized or condensed, was borne but a short time without distress Malted milk food (Horlick's) agreed for a short time, and then a return was made to cow's milk These experiments occupied ten weeks The milk was then predigested, with worse results apparently than had been experienced before The bowels alternated between constipation and diarrhea Vomiting was occasional, usually the dejecta consisted of the food unchanged Fermentation and gaseous eructations were frequent. The child continued to grow and gain flesh There was no doubt in my mind that the cause of the disturbance in this case was imperfect or under development of the stomach

Such cases may persist through childhood and even to adult life When they do it is difficult to differentiate them from another class of cases, which result from cicatrices following ulcers of the stomach

Case 2 —I was called to see a baby seven or eight months old, at the breast It was emaciated, yet nursed feebly Examination of the mother's milk showed it to be poor in quality but abundant in quantity The baby suffered pain from gaseous distension of stomach and bowels Vomiting was frequent, and occasionally diarrhea Treatment made no special impression Then the infant was given cow's milk but with no beneficial result, rather an increase of the dyspeptic symptoms Other changes were made without relief until condensed milk (Swiss brand) was given Very soon after this change the digestive derangement subsided and the little patient began to gain flesh The recovery was complete This case was undoubtedly one due to dietetic disturbance

Case 3 —The influence of heat is illustrated by the following case I was called in July to see a baby which was suffering with diarrhea The patient vomited occasionally, suffered some distress in the stomach and bowels, took its mother's milk ravenously, diarrhea lienteric, except when charcoal, lime water or pepsin were given, then the discharges were better for a time The child was ten months old The weather was very warm At first directions were given to remove nearly all clothing, bathe the patient frequently and keep it cool The treatment was followed by immediate improvement The weather became warmer, the patient worse The use of cold water and ice relieved the symptoms The patient's temperature was not increased There were no evidences of enteritis or colitis On cool, cloudy days the case was better, on warm days worse A change to cow's milk was followed by negative results, no increase or diminution in symptoms The patient recovered when cool weather came

Case 4 —That the presence of bacteria may cause dyspepsia in an infant is well illustrated by the following Baby F was a year old, a bottle baby It had attacks of stomach derangement every few days or weeks, especially during the summer At such times it had colicky pains, distension of stomach and bowels, vomiting of coagulated milk, with similar coagula passing from the bowels, causing diarrhea No fever When I was called the condition was such as just described, somewhat aggravated by the warm weather Everything about the child was dirty, an innumerable host of flies trying to clean things up The bottle nipple was not clean, having many specks of milk coagula and fermented flakes upon it The bottle was in the same unhygienic condition Similar specks were found in the baby's mouth Although a microscopic examination was not made, I was satisfied that the case was one of functional dyspepsia due to the bacteria and their products engendered in what was evidently a favorable culture medium The treatment, which consisted in cleaning up the field for operation and the use of antiseptics, confirmed the diagnosis by producing a cure

Case 5 —Cases of functional dyspepsia due to some neurosis are rare in young children, but the following I think well illustrates a case due to reflex influence induced by disease in some other part of the body I was called to see a boy 5 years old who had been suffering with poor appetite and deranged digestion for some months Gaseous eructations were frequent, but the stomach was not permanently dilated nor very frequently distended by gas Food of almost any variety and kind, whether nitrogenous or non nitrogenous, caused more or less distress Soon pyrosis and other symptoms made eating dreaded A few weeks after the beginning he showed signs of failure of nutrition, began to be anemic, lose flesh and grow weak The bowels were regular No tenderness of the stomach was manifested and the temperature was not above normal About two months from the first indications of disturbance I was called because constipation had become troublesome and a tumor was discovered in the lower part of the bowel Examination revealed no organic disease of the stomach, but did reveal a sarcoma of considerable size in the pelvic cavity, chiefly to the right of the median line The tumor, about 4 inches in diameter, pressed upon the rectum and interfered with the normal evacuations of the bowel Perhaps eventually the fermentation and ptomains occurring in the bowels caused by retained feces were prominent factors of the gastric as well as intestinal disturbances The case passed rapidly to a fatal termination without further gastric derangements than those due to reflex influences and the poisoning caused by fecal ptomains

Case 6 —The last case I desire to mention was one who had been prostrated for several weeks with typhoid fever He was 8 years old and had been greatly weakened by the long sickness When the milk diet was no further insisted upon and a gradual change was made to other food, gastric disturbances in the way of eructations, distress, distension and heartburn were frequent These continued for three weeks They were due to the anemic and atonic condition of the stomach and should certainly be considered functional disturbances Dietetic care and recovery of strength and health removed all dyspeptic symptoms, so that after three weeks and since there has been no evidence of gastric trouble

Other cases of anemia and atonic conditions may be accompanied by functional dyspepsia, just as in adults

This brief presentation of cases will help to impress the writer's views of etiology and treatment of functional dyspepsia By far the greater number of cases are due to improper food, the improper administration of food or to reduced vitality An extended experience with the use of hydrochloric acid and pepsin will convince one that the relative number of cases cured by these remedies is small in fact, the number benefited will be disappointing Still we can not rely exclusively upon dietetic and tonic treatment An attempt to render the alimentary [illegible] aseptic i paramount The following are the chief indications to be met in this condition 1 Correct the food both as to quantity and quality 2 Try to render the stomach and intestines aseptic 3 Assist nature in her effort to restore the natural functions and tone up the system

1 Too frequently the undeveloped state of the salivary glands in the first few months of infancy is forgotten and food, such as rice water and cereal preparations, is given which can not be digested in the stomach and in many cases at least is not completely digested in the intestines A similar result may obtain if given in too large quantities later in life Under such circumstances the undigested food becomes a nidus for the growth of bacteria, fermentations result, irritating gases and bacterial products may cause diarrhea and at times constipation A too abundant proteid diet of eggs and meat may in a similar manner and for the same cause result in putrefactive decompositions and the gases formed likewise produce constipation or diarrhea, even in older children

2 The rational treatment in these cases is, of course, antiseptics An effort should be made to correct or remove the cause and give antiseptics Antiseptics can not be given in sufficient amounts to overcome the condition unless an irritating diet be corrected, especially is this true in nursing and bottle babies It is true also in older children Salicylate of bismuth, salol, carbolic acid, charcoal and other antiseptics used in these conditions have given me excellent results I have treated diarrheas due to indigestion in the same way with like results In functional dyspepsia, however, a habit of indigestion may be established, as it were, and a tendency to certain bacterial growths may become persistent Here it is necessary to persevere in an antiseptic course of treatment I have lately treated bacterial diarrhea of a very aggravated type, in patients old enough to be ng a mixed diet, by the administration of a milk t and salol without other medication and with the st satisfactory results Salol may be given in doses one to two grains every two or three hours until provement occurs Infants under one year yield ry readily to salicylate of bismuth Where from osyncrasy or other cause the salicylate is not well borne, salol in one-half grain doses will frequently be all that is needed In many cases minute doses of calomel act as an antiseptic and afford gratifying relief Cases of summer complaint preceded or accompanied by functional dyspepsia frequently yield quickly to the antiseptic treatment The same is true of those dyspeptic cases following prostrating fevers, neuroses and other forms of exhaustion in which there is fermentation or putrefaction of food due to delayed or weak digestion and the formation of irritating gases The dilatation of the stomach which so frequently accompanies functional dyspepsia in children is nearly always due to gaseous distention and is temporary The removal or diminution of the gas is a step toward a cure Where much distention exists and antiseptic practice does not afford ready relief, the stomach-tube or a soft catheter may be introduced through the mouth or nose and the gas allowed to escape The general douching of the stomach seems to me to be less valuable in children than in adults, but sometimes it is useful to remove offending matters The douche is sometimes of value also in atonic cases where the gastric walls are relaxed by over distention or a weakened condition of the general system, anemia, etc

3 Finally it is necessary in many instances to give hydrochloric acid, pepsin, lactopeptin, peptenzyme, papoid, diastase and similar preparations to help correct the deranged secretions and assist in digesting the food In addition to the administration of these internal remedies which act chemically or by catalysis, stomachics, the aromatic sulphuric acid, nitric or the nitro muriatic acid and other preparations to stimulate the secretions may be needed An alcohol sponge bath twice a day followed by inunction with cocoanut or olive oil to which quinin may be added in suitable cases, frequently aids materially in restoring the patient to health and vigor The use of malt preparations and other tonics is frequently demanded The anemia, neurasthenic or other conditions of depressed vitality will guide in their administration

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THE TREATMENT OF CHRONIC INFLAMMATION OF THE BLADDER, WITH REPORTS OF TWO CASES OF CONGENITAL DIVERTICULA

Read before the Colorado State Medical Society, June, 1896

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Chronic inflammation of the bladder is practically always due to microörganisms, the one most often encountered being the bacillus coli communis, which exists normally in such abundance in the intestinal canal The gonococcus, the tubercle bacillus, the typhoid bacillus, the various pyogenic bacteria, etc , are also frequently found It should never be forgotten that it is not a calculus, an enlarged prostate a tumor, or a quantity of residual urine which is the direct cause of an inflammation, but the bacteria which have in some manner gained entrance to the bladder in presence of these conditions Even a cancer does not produce inflammatory symptoms until infection has taken place I had recently under my care an old gentleman with vesical carcinoma, whose urine remained free from pus for a considerable time after the growth began It is possible for germs to enter the bladder through the kidneys, the urethra, and even through the blood, but in most cases catheterization is responsible for simple infection A vesical calculus may exist for years without a sign of cystitis, provided no instrument has been introduced into the bladder I have seen a man with an enlarged prostate whose bladder had been dilated, almost to the umbilicus, with residual urine for over two years, and yet the urine when removed was as clear as spring water

From a therapeutic standpoint, chronic inflammations may conveniently be grouped under three heads 1, inflammation in connection with the presence of a foreign substance—calculus, tumor, piece of catheter, etc , 2, inflammation in connection with the presence of residual urine, 3, inflammation due to specific infection, such as gonorrhea, tuberculosis, syphilis, etc Under the last heading may be placed inflammations due to certain microörganisms other than those of the diseases mentioned

The first two groups are closely allied It is not so much because a foreign substance exists, or because it injures the mucous membrane, that inflammation occurs, but because the bladder is unable to clear itself sufficiently of objectionable ingredients of the urine, which remain collected about the substance. In other words, it is to the residual urine that the trouble is due. Nevertheless, the divisions given above are retained for the sake of convenience.

1. Inflammation in connection with foreign substances.—It is self-evident that rational treatment indicates removal of the offending substance, be it stone, tumor or other material. Simple removal is usually sufficient, provided no obstacle to complete emptying of the bladder remain, such as atony, a diverticulum, etc. I have observed a case in which a stone had existed in the bladder for nearly fifteen years, where the marked inflammatory symptoms disappeared within a few days after lithotomy had been performed.

2. Inflammation in connection with residual urine.—This is found in enlarged prostate, stricture of the urethra, paralysis and paresis of the bladder, certain diverticula, etc. In case of stricture, the enlargement of the narrowed urethra is the essential feature of treatment. The management of other forms is not so simple, and often taxes the surgeon's resources to the utmost.

General treatment.—It should be appreciated by all that general treatment is of much less importance than is usually supposed. The various balsams, resins and other compounds, so often mentioned in books and so widely advertised, often do some good, but as curative agents they are sadly deficient. They are, nevertheless, prescribed on every hand, frequently to the exclusion of local measures. Local treatment in chronic cystitis is the only reliable treatment.

We do not speak at present of "soothing the mucous membrane" by internal remedies, but of "inhibiting bacterial growth by means of antiseptics." Good may be accomplished in this way, although much less than is often imagined. Perhaps the most satisfactory drug for the purpose is salol, given every few hours in 5 grain doses.

The patient's bowels should be kept open, not only because constipation leads to congestion of the vesical veins, but because there is no more efficient method of removing poisonous substances from the system than through the bowels. The necessity of proper foods, tonics, cleanliness of the skin, etc., will suggest itself. Plenty of milk at frequent intervals does excellent service, both as a food and as a diluent of the urine.

Local treatment.—The main indications are: 1, disposal of residual urine; 2, washing out the bladder.

Residual urine.—This must be removed, no matter how small the quantity. If the urethra will easily admit a catheter of sufficient size to thoroughly drain off not only all traces of urine, but stringy pus and clots of blood which may also be present, then the regular use of a catheter will often be sufficient. When the inflammation is obstinate or severe, a soft catheter may at times be tied in and continuous drainage instituted. This method, which is not extensively used in this country, gives excellent results, even in cases of enlarged prostate. But if only a very small or specially constructed instrument can be employed, or if the patient can not be entrusted to catheterize himself, or if the channel is irritable, or if there are other reasons why the use of a catheter is unsatisfactory, then more radical procedures become necessary. At the present day the operative measures most frequently adopted are castration, resection of the vasa defferentia and suprapubic cystotomy with retention of a permanent opening. A sufficient number of cases have been reported for us to say with considerable certainty that, in general, castration furnishes the surest and safest means of combating the evil effects of an hypertrophied prostate. Some cases of inflammation, however, are so severe, and the debilitated patient so much in need of immediate relief, that suprapubic cystostomy should be done at once, and thorough drainage of the bladder secured. In all other cases castration is applicable, provided the nature and consequences of the operation are fully appreciated by the patient. Among those within the age of sexual activity there will always be some who naturally object to the removal of the testicles, no matter how strongly the operation may be indicated. For these the older operation of prostatectomy is indicated, although it should not have the preference, on account of its uncertainty and danger. For patients who, while recognizing that their term of sexual activity is past, still object to castration for various reasons, resection of the vasa deferentia may be done, although it offers at present a less certain prospect of cure than removal of the testicles.

Washing out of the bladder.—Several points should be borne in mind in this connection.

1. The bladder must not be over distended, as this may keep up a chronic inflammation which would otherwise tend to subside. There is also reason to suppose that septic material can in this way be forced into the mouths of the ureters, thus leading to kidney complications. No more than four or five ounces of fluid should be employed, and less than this is often preferable. A good-sized syringe of hard rubber, which can be easily used with one hand, is safer and better adapted to the purpose than a fountain syringe, although the latter is in general use.

2. The prostatic urethra should be irrigated as well as the bladder, especially in gonorrheal affections, as it is often the seat of inflammation which may reinfect the adjacent viscus. The catheter should be slowly inserted while the fluid is being injected until the fluid no longer appears anteriorly at the meatus, but passes through the deep urethra into the bladder, the eye of the catheter being just beyond the constrictor muscle. When practicable, it is well to leave considerable fluid in the bladder, which the patient is instructed to pass after the catheter is removed, thus irrigating the channel from behind forward. If the bladder, however, is insufficient, and the solution not a mild one, it is better to withdraw it entirely. In obstinate cases of posterior urethritis it answers an excellent purpose to occasionally inject a few drops of concentrated solution of nitrate of silver (½ to 5 per cent.) with an Ultzmann's capillary injector.

3. A single, not a double, catheter should always be used. The current from a double catheter selects a short, easy channel for itself, and passes directly from one eye of the instrument to the other without distending the folds of the mucosa and cleansing the bladder as it should.

4. When the organ is not too sensitive, the fluid should be injected with some force, so as to more effectively wash the mucosa.

5. The catheter should be soft rubber or linen, as large as can be used without undue discomfort, especially when thick pus and clots of blood are present,

secured around the waist and under the perineum by rubber bands held the ball in position The patient has been wearing this apparatus in perfect comfort for about three months, and finds that he is inconvenienced scarcely at all by his condition, while his health and energy have been completely restored

An examination of these two cases presents some interesting points 1 Congenital diverticula can exist for many years without their possessors being aware of any abnormality 2 Cystitis may not take place until infection is caused by catheterization, gonorrhea, etc 3 Cystitis in the presence of diverticula may sometimes be cured without opening the bladder, and remain so indefinitely, provided reinfection is not brought about 4 Hemorrhage from chronic cystitis may be so great as to strongly simulate hemorrhage from a tumor 5 Residual urine, without stricture of the urethra, enlargement of the prostate, or paresis of the bladder, should be suggestive of a diverticulum 6 Even in the best hands, the opening of a diverticulum may be overlooked with the cystoscope Perhaps a reason for this is that the mucosa during life is so congested and folded about the opening as to conceal it 7 In obscure vesical affections, with cystitis, it is rational to open the bladder for purposes of exploration and drainage, the preferable incision being the suprapubic, as offering the better opportunity for removal of foreign bodies, if such be present

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DANGERS OF BICYCLING, WITH REPORT OF A CASE OF ACUTE DILATATION OF THE HEART

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Ever since the great popularity which has attended bicycling in this country numerous articles have appeared in the medical and lay press pointing out real and imaginary dangers liable to beset those attracted to this sport These dangers have attended both sexes, more particularly the female bicyclists, and consisted in disturbances affecting the pelvic viscera No doubt over-indulgence in this pastime can and will produce congestions and irritations of these organs, perhaps displacements and even inflammations, but such cases are comparatively rare

From the moral point of view another danger has been discovered by the Woman's Rescue League of Washington That the bicycle is nothing more or less than the devil's advance agent, and through the opportunities which it offers is causing an alarming increase of immorality among women The writer believes this to be true only in so far as it affects those women upon whom the devil already has a mortgage, and employs the wheel only as a subterfuge to foreclose the claim The wheel has been a great aid to physicians in the treatment of neurasthenic, hysteric and hypochondriac women, and the good it has done to them and the pleasures derived from it by others will more than counterbalance the harm which those unable to ride think it has and may create Pleasure and health can be derived from bicycling only so long as the laws of hygiene and common sense are heeded, and then violation will be followed by disagreeable consequences

The male sex is predisposed to that ungainly and unhuman distortion, the "camel's back," as a result of faulty posture and ambition for speed, and perhaps fame Not only is the spinal column strained and distorted, but the thoracic and abdominal viscera are subject to undue pressure, and hence to restricted movements and imperfect physiologic action No sport is a healthy one which in its performance coerces the body into an unnatural position, and the great popularity attained by rowing and base ball is partly due to the comfort and pleasure which the normal position of the body insures

Through long-continued pressure caused by long rides and faulty fitting saddles, the male genito urinary tract is liable to damage, and this should therefore be carefully guarded against The dangers which do, arise, however, from bicycling affect the beginners, and scorchers mostly, who have not learned the secret of the sport, namely, moderation

After consent is obtained from the family physician to ride, a properly geared wheel should be selected, with an easy and comfortably fitting saddle, the handle bar raised so as to give the body an erect and graceful position, and this advice constantly borne in mind, that the sport should be discontinued at the first sign of fatigue As the days go by this fatigue will grow less and less, and the rider able to take longer spins as the muscles become firmer and more accustomed to this form of exercise The whole system undergoes a certain kind of training or physical education, the heart and respiratory muscles accustoming themselves to the necessary strain just as do the extensors of the thighs and the calf muscles Just as over-indulgence results in tiredness and lameness of the leg muscles, so also are the heart and respiratory muscles affected The heart through increased work put upon it by long, rapid spins is taxed to its utmost, and when persevered in, serious damage to the heart walls or heart valves may result As Osler truthfully says "Endurance in prolonged contests is measured by the capabilities of the heart and its essence consists in being able to meet the continuous tendency to overstep the limits of dilatation "

One form of heart trouble especially is attended upon over-exertion and over-fatigue, namely, the acute dilatation of the heart walls, due to over distension of the muscle fibers The cause of this dilatation is an incomplete exhaustion of the ventricles, generally the right, during systole, and an excessive engorgement during diastole with possibly some defective nutritive change in the muscle fibers The symptoms arising from this condition are subjective and objective and are well illustrated in a case which recently came under my observation

James H C , age 37 years, height 5 feet 6 inches, weight 138 pounds, married and has eight children He had an attack of rheumatism when 12 years of age, and typhoid fever when 29 Has always been a hard working man, employed on the railroad sometimes ten to fourteen hours daily About May 1, 1896, he purchased a wheel and rode occasionally from his home to the railroad yards, perhaps a distance of half a mile On May 8, 1896, he accompanied a few friends on a spin into the country and rode four miles in twenty five minutes On dismounting he noticed a severe pain over the left side of the chest extending to the neck also that he was completely "winded" and the left side of the chest was throbbing violently After only a few minutes rest, urged by his friends he remounted the wheel and rode home, covering the distance in thirty minutes On reaching home he could scarcely breathe, was in profuse perspiration trembled all over and was obliged to go to bed Vomited during the night the following morning he found he was still in the same condition and was unable to go to work and scarcely able to be on his feet The least exertion caused his left side to 'thump' vigorously while the vessels in the neck throbbed so wildly as to make them perceptible Patient also noticed a feeling of weakness all over the body and a stiffness of the knee joints, accompanied always with great dyspnea

After remaining idle for several weeks and not obtaining very much relief, he consulted me on July 20, 1896, for "weakness and trembling," thinking that he had some nervous disorder, he stated that his sickness began on May 8, 1896, that he worked the day previous and up to that day was in his usual good health

Status Præsens —Face has an anxious, apprehensive expression, eyes are glassy and facial muscles quivering Pallor and emaciation are pronounced There is a slight tremor to the head is not painful on percussion and has never had headache

The examination of the eyes was made by Dr R H Satterlee, of Buffalo, N Y "Ophthalmoscope shows hyperopia, right eye 2 diopters, left eye 1 diopter No astigmatism could be discovered Both eyes have unsteady lateral movement Left eye does not move as freely as right eye Weakness of all eye muscles, particularly the interni Accepts no glass at first, vision later after wearing R + 50 D, L + 25 D for half an hour, 20 20 These prescribed to be worn two months constantly"

Strength of arms diminished, dynamometer test shows, right hand 60, left 40, tremulous and with increased tendon and muscular reflex action The legs likewise are weakened, also tremulous, and the reflexes are exaggerated There is no anesthesia or hyperasthesia of the face, arms or legs

The chest offers the most important symptoms, both objective and subjective The precordial area is largely increased and reverberates with every heart beat The apex point is diffused and impossible to locate On palpation a tremulous and purring sensation is experienced which is communicated to nearly the whole side of the thorax Percussion shows increased area of cardiac dullness extending to the right of the sternum, to the left of the mammillary line and below the nipple Auscultation does not reveal any valvular murmurs, although the sounds are indistinct and diffused The heart beats number 130 to 150 per minute

Urine is increased in quantity, but does not contain albumin or sugar Bowels are regular Sleep is fair but is often awakened by the heart's action During the day he is aware of much fluttering of the heart while napping

On July 27, 1896, I again had occasion to see the patient and found his heart in practically the same condition, beating 130 times per minute, and as tumultuously as on the former examination

The history of this case leaves little doubt as to the correctness of the diagnosis—acute dilatation, and the cause of such dilatation—over bicycling The distance covered and the time would be insignificant to a trained wheelman, but to one not accustomed to long rides it was quite an undertaking and was fraught with serious consequences In conversation with beginners in the sport one hears so often, "I rode eight or ten miles to-day in such a time," or "I rode a mile in such a time and have only been on the wheel a few days," and yet these riders may never have taken any kind of regular physical exercise They certainly are imprudent and should be discouraged in their ambitious tendencies until they are in condition to endure the necessary strain To the writer this seems one of the greatest dangers of bicycling and yet one of the easiest to avoid

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THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration, held at Atlanta, Ga, May, 1896

BY EUGENE FOSTER, M D

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(*Continued from page 753*)

[30] Dr Kinnis, formerly Superintendent of Vaccination at Colombo, in his "Report on Smallpox as it appeared at Ceylon in 1833–4," and in an appendix relating to observation made by Dr Forbes in the epidemic of 1830, gives enumerations from which the annexed table is compiled It will be observed that the gradation of death rates marked in the last column, though far less detailed than in Mr Marson's statement, is to the same general effect And in the cases noticed by Dr Kinnis himself the difference is further developed, for he distinguished persons pretending to have been vaccinated into such as had no marks and such as had unsatisfactory marks of vaccination, and found that the *death rate of the latter was* 26$\frac{1}{3}$, *that of the former* 32 1 7 Cases of chickenpox are not included in the annexed table, and Dr Kinnis gives at length (pp 10–14) his reasons for concluding "that the febrile eruptive disease known in Ceylon by the name of chickenpox arises from an infectious matter essentially different from that which produces smallpox and modified smallpox"—Op cit Colombo, Govt Press, 1835

Occurrences and fatality of smallpox

	Number of cases	Number of deaths	Percentage of deaths
In persons decidedly not vaccinated	851	146	41 5
In persons having no marks or but unsatisfactory marks of vaccination	199	52	26 1
In persons having satisfactory marks of vaccination	187	3	1 6
In persons having marks of smallpox	4	2	

Comparison of the number of cases of smallpox which were treated in the General Hospital at Vienna during the 5 years 1851–55 inclusive as regards the *ages of patients and the number of cases which terminated fatally*

Age of patients	Vaccinated		Not vaccinated	
	Total number	Number of deaths	Total number	Number of deaths
To 10 years of age	55	8	34	15
From 11 to 20	834	16	111	25
From 21 to 30	892	43	83	23
From 31 to 40	171	7	10	5
From 41 to 50	35	1	8	3
From 51 to 60	9	1	8	
Total	1,995	76	244	71

The number of cases of variola in various forms was 2,239, namely

Who had been vaccinated	1,995
Who had not been vaccinated	244

Vaccinated as well as non vaccinated persons were seized with the smallpox, still, with this difference, that of the vaccinated cases 8$\frac{1}{3}$ per cent, but of the non vaccinated 33 3 per cent were cases of variola vera

Of the 1,995 vaccinated cases 76, and of the 244 non vaccinated cases 71, terminated fatally

[31] "Interesting and instructive are, moreover, the following figures which throw light upon the relation existing between unvaccinated, vaccinated and revaccinated persons becoming sick or dying of smallpox According to the memoranda of certain hospitals, among those who died of smallpox during the years 1870 and 1871 were

	Unvaccinated Per cent	Vaccinated Per cent	Revaccinated Per cent
In Muenster	80	13	0
In Posen	70	12	2
In 4 hospitals of Berlin	54	13	0
	70	16	4
	66	15	4
	81	14	9

In Chemnitz in 1871, among 249 dead were only seven vaccinated persons

According to Buchanan in 1881 in England, there was only one victim who had been vaccinated while there were 200 deaths among unvaccinated children from 1 to 2 years old

In Bavaria in 1882, among the smallpox cases were counted 14 6 per cent vaccinated, 5 8 per cent revaccinated, 45 5 per cent unvaccinated

In the Imperial General Hospital of Prague during ten years, from 1847 to 1856, 872 persons were treated for smallpox, of these, 819 had been successfully vaccinated, and forty three unsuccessfully or not at all With ten the vaccination or its result, could not be ascertained in a manner to be relied upon. Here must be particularly remarked that in 1847, in the aforementioned institution, not one case of smallpox is recorded

Out of the 872 patients, sixty three died, and of this number forty one were of those who were described as successfully vaccinated, twenty as vaccinated without success, and two as those concerning whose vaccination nothing certain was known

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[30] See first report Royal Vaccination Commission, 1889, p 75

[31] U S Consul Berlin loc cit

Leaving out those concerning whose vaccination nothing could with certainty be said, it is here shown that of the successfully vaccinated the twentieth part died, of the unsuccessfully vaccinated the half, while the number of vaccinated patients was nineteen times greater than that of the non vaccinated

In the Hospital of the Brothers of Mercy at Prague, during the years 1847 to 1856 inclusive, 410 patients were treated for smallpox, of these, 370 were vaccinated, and only forty non vaccinated Of the vaccinated four died, of the non vaccinated five died

Of the vaccinated (the success or non success of the vaccination not being taken into consideration) the ninety second part died, of the non vaccinated the eighth part died, while the number of the vaccinated was nine and one fourth times greater than that of the non vaccinated

In the Elizabethan Hospital at Prague, during six years, from 1851 to 1856, 118 cases of smallpox were admitted, of these, 108 were vaccinated and ten non vaccinated Of the vaccinated two died, of the non vaccinated one died, *i e*, one fifty fourth of the vaccinated, and one tenth of the non vaccinated, the vaccinated patients being ten and four fifths times the number of the non vaccinated

In order to arrive at an idea as to the frequency of attacks of smallpox during the different periods of life, and the amount of safety secured by vaccination, we subjoin the following tables, which show the rates of mortality among the vaccinated and non vaccinated patients of the General Hospital, Vienna, during the period above mentioned

Ramsey on smallpox, Transactions New York Medical Society

Ages	Total number of cases	Vaccinated		Non vaccinated	
		Cases	Deaths	Cases	Deaths
1 to 10 years	418	234	35	184	74
11 to 20 years	2 634	2 228	83	406	83
21 to 31 years	2 671	2,329	128	342	115
31 to 40 years	406	354	21	52	24
41 and upward	84	72	4	12	4

Deaths per 100 cases at each age, as follows

	1–10	11–20	21–30	31–40	41 and upward
Among 5 217 vaccinated	14 9	3 7	5 6	5 9	5 5
Among 996 non vaccinated	40	20 4	33 6	46 2	33 3

Report of the Faculty of Medicine at Prague, submitted to Minister of the Interior November, 1856

Vaccinated and unvaccinated cases of smallpox which terminated fatally, according to the official vaccination return (21 years)

Year	Cases of vaccination	Remaining non vaccinated [3]	Smallpox			
			Cases		Deaths	
			Vaccinated	Non vaccinated	Vaccinated	Non vaccinated
1835	132,727	4 029	505	430	20	136
1836	130,194	3 319	374	215	26	64
1837	126 123	3 971	57	123	4	52
1838	133 527	3 967	101	96	15	32
1839	132,523	3 906	160	168	20	70
1840	140 895	3 585	1 138	966	89	351
1841	139,471	3 482	1,585	1,522	83	552
1842	142 970	3 180	681	703	39	208
1843	142,314	2 874	627	714	21	229
1844	126 647	6 109	61	148	7	45
1845	149 612	6 410	55	63	2	25
1846	146 467	5 475	6	50		7
1847	141 268	5 361	19	25		4
1848	132 320	5 718	227	169	17	49
1849	139 523	5,704	575	645	65	177
1850	156,561	6 314	568	374	14	131
1851	152 294	4 094	16	293		43
1852	161 364	3 689	252	231	12	65
1853	145 038	3 067	327	168	3	39
1854	161,713	2,927	457	207	7	61
1855	156 424	2 349	389	156	8	56
Total	3 005,578	90 150	8 178	7 462	425	2 224
Average	$143\,122\frac{16}{21}$	$4{,}291\frac{19}{21}$	$389\frac{9}{21}$	$355\frac{[illegible]}{21}$	$20\frac{3}{21}$	$105\frac{19}{21}$

Remarks—One case of smallpox occurs among 36⅔ vaccinated 12⅓ non vaccinated One fatal case of smallpox occurs among 7,166⅓ vaccinated 40⅔ non vaccinated Among cases of smallpox died the nineteenth part of the vaccinated the third part of the non vaccinated

"M Bousquet,[33] in his detail of the epidemic which prevailed at Marseilles in 1825, states that the whole population was estimated at 40,000 Of these, 30,000 had been vaccinated, 2,000 had had smallpox, 8,000 had neither been vaccinated nor had smallpox Of the 30,000 vaccinated 2,000 were seized with smallpox, twenty of whom, or one for every hundred affected, died Of the 2,000 who had before had smallpox, either naturally or by inoculation, twenty were attacked, and of these four died, or one for every five who took the disease Of the 8,000 who had not been vaccinated nor had smallpox, 4,000 contracted it and 1,000 died, or one in every four By this it appears that one half of the non vaccinated, one fifteenth of the vaccinated, and one hundreth of the variolated took the disease But such was the difference in the comparative mortality of the attack in the vaccinated and the variolated, that while the variolated part of the population were cut off in the proportion of one out of every 500, the vaccinated lost only one out of every 1,500, or, in other words, of an equal number of variolated and vaccinated cases, three of the variolated died from the second attack, for every one that died who had been previously vaccinated "

In Berlin in the year 1872,[34] the mortality of the disease was 243 per 100,000 population, and the year after it was 262 Thereupon vaccination during the first year of life and revaccination at the age of 12 years was made compulsory by law, and with the effect that in the year 1875 the death rate was lowered to 36 per 100,000 inhabitants, the next year it was lowered to 31, the next to 3 and so through later years with an average annual mortality of 1 7 per 100,000 people During the year 1890 only fifty eight cases occurred in the whole German Empire, or 1 18 cases to each 1,000,000 of population

A village in Leicestershire, England, of 1,300 inhabitants was visited by the pestilence in 1872 All but two of the inhabitants were efficiently vaccinated and escaped the disease, whereas the two unvaccinated persons died of it

The late Dr J H Rauch, for many years Secretary of the State Board of Health, has shown that in the Illinois epidemic of 1881–83, the mortality rate of the vaccinated was approximately 6 per cent, and of the unvaccinated it was 49 per cent

Corbally has demonstrated that in the Sheffield, England, epidemic of 1887–88, vaccinated children were, as compared with the unvaccinated, twenty times less liable to attack from smallpox, and twenty four times less liable to die when attacked That is to say, the vaccinated children had, as compared with the unvaccinated, four hundred and eighty fold security against death from smallpox

In the Halifax, England, epidemic of 1892–93, the death rate from smallpox among vaccinated persons was 1 8 per cent, and among the unvaccinated it was nearly 41 per cent No case occurred in a vaccinated child under 5 years of age, and in the Leicester epidemic of 1893 no case occurred in a vaccinated child under 10 years of age

From the records of 5,000 cases treated in the Municipal Hospital of Philadelphia, according to W M Welch in the *New York Medical Journal*, March, 1894 it appears that the death rate in that institution in post vaccinal cases, and all in which there had been an attempt at vaccination are included, was 16 26 per cent, and the death rate in non vaccinal cases was 58 38 per cent

Seventy three per cent of the cases in unvaccinated infants under 1 year of age ended in death, and no fatal case occurred among vaccinated infants of the same age Between the ages of 1 and 7 years the mortality of post vaccinal cases was 5 7 per cent and of non vaccinal cases it was 51 48 per cent

In Chicago only seventeen cases of smallpox have occurred in the last fifteen years among the well vaccinated public school children of that city, whose average number exceeded 200,000

Dr Clendenin,[3] health officer of Cincinnati Ohio says that, in the epidemic of smallpox in that city (1868–69) 95 per cent of those who died of smallpox were among the unvaccinated He further says that no death occurred from smallpox in which there was unmistakable proof that the individual had been properly vaccinated

Dr Benj Lee of Philadelphia, Pa in his report to the Pennsylvania State Medical Society 1873, shows that the mortality from smallpox in the epidemic then just ceased was 55 9 per cent in the unvaccinated in the vaccinated with one vaccinal scar it was 15 2 per cent, while the mortality among those having five or more scars was 5 5 per cent

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[3] I presume that ungeimpft verblieben in the third column is intended to denote (in comparison with the total births of the year) the number of infants who remain unvaccinated at the end of the legally specified time —[J S

[33] Transactions American Med Assn 18[illegible], p 2[illegible]

[34] Vital Statistics Indiana 18[illegible] p [illegible]

[3] Dr W B Davis Transactions Ohio Medical Society 18[illegible]

During 1875 the mortality among 1,866 vaccinated persons treated in the Riverside Hospital, New York City, was 375, while among the 405 patients who had never been vaccinated, 200 died

Statistical tables demonstrating the unquestionable controlling power of vaccination over smallpox might be multiplied indefinitely, but I have already, I fear, entered too lengthily into this part of my subject I will therefore close the statistical data under Proposition 6 by quoting the following

1 Mortality from smallpox among the vaccinated doubtfully vaccinated and unvaccinated[36]

	Cases			Deaths			Mortality Per cent		
	Vaccinated	Doubtfully vaccinated	Unvaccinated	Vaccinated	Doubtfully vaccinated	Unvaccinated	Vaccinated	Doubtfully vaccinated	Unvaccinated
London Smallpox Hospital (1836-67)[37]	10 308	268	2 920	790	106	1 018	7 59	10 9	34 9
Metropolitan Asylum Board Hospital[38]	13,575	2,130	3,972	1 027	671	1 593	7 56	31 5	40 0

2 Mortality from smallpox among the vaccinated, doubtfully vaccinated and unvaccinated under 10

	Cases			Deaths			Mortality Per cent		
	Vaccinated	Doubtfully vaccinated	Unvaccinated	Vaccinated	Doubtfully vaccinated	Unvaccinated	Vaccinated	Doubtfully vaccinated	Unvaccinated
Metroplitan Asylum Hospitals[39]	1 291	359	1 812	[illegible]	102	745	1 83	28 4	40 2

Dr Lyon Playfair in a speech in the British House of Commons, June, 1883, said "On this point I would refer to the case of Leipsic, which for eighteen years prior to 1870, had zealously supported the anti vaccination movement, and during that period there had been but twenty nine deaths from smallpox, although vaccination had been greatly neglected in the town When the pandemic reached Leipsic in 1871 the town had a population of 107,000, and smallpox attacked 1,027 of this number, or 9,600 per millon of the population, and out of 3,892 children under 15 years of age, 715 died, being 30,000 per million"

"The statistics of the London epidemic were prepared with great care, and the mortality among the vaccinated was 90 per million inhabitants, while among the unvaccinated it was 3,350 per million In the hospitals 45 per cent of the unvaccinated and 15 per cent of the vaccinated died"

Comparative mortality of smallpox after smallpox, and of smallpox after vaccination

Authorities	Smallpox after smallpox			Smallpox after vaccination		
	No of cases	Deaths	Ratio of deaths to 100 cases	No of cases	Deaths	Ratio of deaths to 100 cases
Thompson Edinburgh	71	3	4 2	310	1	0 3
Chelsea Military Asylum	26	3	11 5	24	0	0 0
Heim Wurttemberg	39	14	35 8	147	42	28 5
Bosquet Marseilles	20	4	20 0	2 000	20	1 0
Gregory, London	9	2	22 2	789	46	5 8
Total	165	26	15 7	3 270	109	3 3

It thus appears that, while they who take smallpox a second time die in the proportion of 15 7 in the 100, they who take smallpox after vaccination die only in the proportion of 3 3 in the 100—a proportion absolutely lower than the mortality of the mildest disease

Borough of Sheffield, England In this Borough in an epidemic of smallpox during the years 1887 and 1888, Dr F W Barry, inspector of the Local Government Board, after having a house to house inspection made throughout these two years, gives the following report as the result of his investigation

VACCINATED	UNVACCINATED
In the borough of Sheffield there resided 268 397 persons who had been returned as vaccinated Of these 4,131, or 1 55 per cent, had been attacked by smallpox and 0 07 per cent died of the disease	There were 5,715 citizens of all ages returned as unvaccinated Of these 552, or 9 7 per cent, had been attacked by smallpox, and 4 8 per cent died
Of the 68,236 vaccinated children under 10 years of age 353 or 0 5 per cent contracted smallpox, and 6, or 0 009 per cent died	Of 2 259 unvaccinated children under 10 years of age 228 or 10 1 per cent, contracted smallpox and 100 or 4 4 cent, died
Of 196 905 vaccinated persons aged 10 years and upward 3 374, or 1 9, contracted smallpox and 194, or 0 10 per cent died	Of 3 429 unvaccinated persons aged 10 years and upward 322 or 9 4 per cent, contracted smallpox and 174 or 5 1 per cent, died

The proportions of unvaccinated and vaccinated who were attacked and who died of smallpox among the inmates of houses that were actually invaded by smallpox, that is where people were brought in actual contact with the disease, Borough of Sheffield, England, 1887-1888 Of course in the general population of the Borough a number of citizens were never brought into actual contact with infected persons or fomites

In the whole Borough of Sheffield 18,756 persons of all ages were enumerated as living in houses invaded by smallpox and of these 4,703 or 25 1 per cent contracted the disease, and 474 or 2 5 per cent died

The proportions of the population of the vaccinated and unvaccinated classes respectively, living in invaded houses in the entire Borough, who had been attacked by smallpox and who died of the disease were as follows

VACCINATED	*UNVACCINATED*
Of the 18,020 vaccinated persons of all ages enumerated as living in invaded houses 4 151 or 23 per cent, contracted smallpox and 200, or 1 1 per cent, died	Of the 736 unvaccinated persons of all ages enumerated as living in invaded houses 552 or 75 per cent contracted smallpox and 274, or 37 3 per cent, died

CHILDREN UNDER 10 YEARS OF AGE

VACCINATED	*UNVACCINATED*
Of 1,193 children under 10 years of age 953 or 7 8 per cent contracted smallpox and 6, or 0 1 per cent died	Of 263 unvaccinated children under 10 years of age 225 or 80 9 per cent had smallpox and 100 or 38 1 per cent died
Of 13 135 vaccinated persons aged 10 or upward 3,874, or 28 1 per cent, died	Of 169 unvaccinated persons 10 years old and upward 322, or 68 6 per cent contracted smallpox and 174 or 37 1 per cent died

On page 42 of Report of Royal Vaccination Commission the following facts are to be found giving the proportions of the population of the Borough of Sheffield of the vaccinated and unvaccinated classes respectively at these several age periods who at the end of the census had contracted smallpox, and who had died of the disease

IN THE TOTAL ENUMERATED POPULATION

VACCINATED	UNVACCINATED
Of 33 993 vaccinated children under 5 years of age 121 or 0 36 per cent, had been attacked by small pox and 1 or 0 003 per cent, had died	Of 1 981 unvaccinated children under 5 years of age 128 or 6 5 per cent had been attacked by small pox and 66 (exclusive of children under one month of age), or 3 3 per cent had died
Of 34 843 vaccinated children aged 5 but under 10 years 232 or 0 67 per cent *had been attacked* and 5 or 0 14 per cent had died	Of 278 unvaccinated children aged 5 but under 10 years 100, or 36 per cent had been attacked and 34, or 12 2 per cent had died
Of 32 965 vaccinated persons aged 10 but under 15 years 620 or 1 9 per cent, had been attacked and 11, or 0 03 per cent had died	Of 235 unvaccinated persons aged 10 but under 15 years 91 or 38 7 per cent, had been attacked and 32, or 13 6 per cent had died
Of 27,111 vaccinated persons aged 15 but under 20 years 979, or 3 6 per cent, had been attacked and 19 or 0 07 per cent had died	Of 282 unvaccinated persons aged 15 but under 20 years 84 or 29 8 per cent had been attacked and 53 or 18 8 per cent had died

The above facts are extracted from the testimony of F W Barry, M D, inspector of Local Government Board, Oct 8, 1889, pages 39 to 42 inclusive, Second Report of Royal Vaccination Commission of England, submitted to Parliament, May 29, 1890

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[36] In the statistics of the metropolitan smallpox asylums the 'vaccinated are those who present marks however imperfect of a primary vaccination the unvaccinated" those who precent no marks, and in whose case it is admitted by the patients themselves or their guardians that they have never undergone the operation the doubtfully vaccinated those who present no evidence of vaccination but who profess to have undergone the operation or have no knowledge as to whether they have ever undergone the operation *It is evident that the* 'doubtfully vaccinated' are really unvaccinated'

[37] Marson Evidence *before the* Select Committee on Vaccination, 1871

[38] These include cases admitted into the following asylums Deptford 1875-81 Hampstead 1876-78 Homerton Smallpox Hospital 1871-82 Homerton Fever Hospital, 1876-77 and 1881-82 Stockwell 1882 *Vide* annual reports of the several hospitals For further figures consult report of board of health of the city of Philadelphia, 1872 papers on vaccination by Mr Simon etc

[39] Homerton Smallpox Hospital, 1871-80 Deptford Hospital, 1878, Stockwell Smallpox Hospital 1882

VACCINATED	UNVACCINATED
Of 44 788 vaccinated persons aged 20 but under 30 years 1 207 or 2 8 per cent, had been attacked and 69, or 0 15 per cent, had died	Of 884 unvaccinated persons aged 20 but under 30 years 98 or 10 6 per cent, had been attacked and 61, or 6 9 per cent had died
Of 92 011 vaccinated persons aged 30 and upward 899 or 0 97 per cent, had been attacked and 95, or 0 1 per cent had died	Of 2 028 unvaccinated persons aged 30 and upward 49 or 2 4 per cent had been attacked and 28 or 1 4 per cent, had died

On page 43 of the same report will be found the following tables as to the proportions of vaccinated and unvaccinated in the invaded houses by age periods

VACCINATED	UNVACCINATED
Of 2 151 vaccinated children under 5 years of age enumerated as living in invaded houses 121, or 5 6 per cent, had been attacked by smallpox and 1 or 0 05 per cent, had died	Of 154 unvaccinated children under 5 years of age enumerated as living in invaded houses 128 or 83 per cent had been attacked by smallpox and 66 (exclusive of children under one month old) or 42 9 per cent, had died
Of 2 339 vaccinated children aged 5 but under 10 years 232 or 9 9 per cent had been attacked and 5 or 0 21 per cent had died	Of 109 unvaccinated children aged 5 but under 10 years 100 or 91 8 per cent, had been attacked and 34 or 31 2 per cent had died
Of 2,196 vaccinated persons aged 10 but under 15 years 629 or 25 2 per cent had been attacked and 11 or 0 4 per cent, had died	Of 93 unvaccinated persons aged 10 but under 15 years 91, or 98 per cent, had been attacked and 32 or 34 4 per cent, had died
Of 2,370 vaccinated persons aged 15 but under 20 years 979, or 41 3 per cent, had been attacked and 19 or 0 8 per cent had died	Of 98 unvaccinated persons aged 15 but under 20 years 84, or 85 8 per cent had been attacked and 53 or 54 1 per cent had died
Of 3,274 vaccinated persons aged 20 but under 30 years 1,267 or 38 7 per cent had been attacked and 69 or 2 1 per cent, had died	Of 124 unvaccinated persons aged 20 but under 30 years 98 or 79 1 per cent, had been attacked and 61 or 49 2 per cent had died
Of 5 200 vaccinated persons aged 30 years and upward 890 or 17 4 per cent had been attacked and 95, or 1 8 per cent had died	Of 154 unvaccinated persons aged 30 years and upward 49 or 31 8 per cent, had been attacked and 28, or 18 2 per cent had died

NOTE — Those classified as vaccinated include all persons success fully at any period beyond thirteen days prior to the appearance on them of the eruption of smallpox As a matter of fact I do not think there is a recorded case in which smallpox quickly followed vaccination or re vaccination when the interval between the operation and the appearance of smallpox exceeded six or seven days Those classified as unvaccinated include all persons who have either never been success fully vaccinated or whose vaccination was performed for the first time within thirteen days of the appearance on them of the eruption of small pox In the vaccination census if a person stated that he was vaccinated that was accepted as correct if he stated that he was unvaccinated that again was accepted as correct A certain number were reported as vac cinated who really were unvaccinated " Barry, loc cit

Question 1988 Dr Barry continuing (see page 45) said I propose to read in very much the same manner as I have read with regard to the census data, the relations of vaccination and smallpox as indicated by the health office data I first of all take page 190 The total cases of smallpox reported to the health department to have occurred in the Borough of Sheffield during the period from the commencement of the epidemic to the 31st of March 1888, were 6 088 in number Of these it was stated that 5,035 were of the "vaccinated" as against 1,053 of the "unvaccinated" class In 589 cases, or 9 7 per cent, of the total of all classes attacked the disease proved fatal Of the 5,035 persons of the "vaccinated" class attacked, 246, or 4 9 per cent, died, whilst of the 1,053 persons of the 'unvaccinated" class attacked 343, or 32 6 per cent died In the "vaccinated" class smallpox is reported to have attacked 97 persons under 5 years of age, of whom 1, or 1 per cent, died, 243 between 5 and 10 years of age, of whom 6, or 2 5 per cent, died, 2 034 between 10 and 20 years of age, of whom 38, or 1 9 per cent, died 1,579 between 20 and 30 years of age, of whom 87, or 5 5 per cent, died, and 1,084 aged 30 years and upward, of whom 114, or 10 5 per cent, died In the "unvaccinated" class, smallpox is reported to have attacked 242 persons under 5 years of age, of whom 113 or 46 7 per cent, died, 184 between 5 and 10 years of age, of whom 39, or 21 2 per cent, died, 380 between 10 and 20 years of age, of whom 92 or 24 2 per cent, died, 169 between 20 and 30 years of age, of whom 65, or 38 5 per cent, died, and 78 aged 30 years and upward, of whom 34, or 43 6 per cent, died

Dr Barry, page 51, Second Report of Royal Vaccination Commission gives a tabular statement showing the fatality per cent of admissions in each hospital and all hospitals in Sheffield in 1887 and 1888, and says

From an examination of that table it will be seen that there is a general correspondence between the fatality rates which obtained in the several hospitals at the different age periods The figures with regard to the Lodge Moor and Ecclesall Bierlow Hospitals show the chief variations, but in the case of these hospitals the figures are very small From the summary of the figures with regard to all the hospitals, it appears that the total of 1 798 cases of smallpox, 256, or 14 2 per cent proved fatal Of the total number of cases, 1,351 were of the "vaccinated" as against 447 of the "unvaccinated' class Of the 1,351 persons of the "vaccinated" class admitted, 110, or 8 1 per cent, died, whilst of the 447 "unvaccinated ' persons admitted, 146, or 32 7 per cent, died Of the 1,351 persons of the "vaccinated" class admitted, 67 were under 10 years of age, and of these 1, or 1 5 per cent, died, 573 were aged 10 but under 20 years, and of these 13, or 2 3 per cent, died, 426 were aged 20 but under 30 years, and of these 42, or 9 9 per cent, died, and 285 were aged 30 years and upward, and of these 54, or 19 per cent, died The whole of the persons of the "vaccinated" class who died had been vaccinated in infancy only, with one exception, and the figures show a greater liability to fatal termination with increasing years Of 447 persons of the "unvaccinated" class admitted, 101 were under 10 years of age, and of these 34, or 33 7 per cent, died, 205 were aged 10 but under 20 years, and of these 56, or 27 3 per cent, died, 100 were aged 20 but under 30 years, and of these 41, or 41 per cent, died, and 41 were aged 30 years and upward and of these 15, or 36 6 per cent, died In the hospitals of course all the patients were under the same conditions, they were not being treated in different class houses, some in good ones and some in bad ones, but they were all being treated under the same nursing and with the same general surroundings, and, as I here note in the report, "except during the first few months of the epidemic, very few of the milder cases found their way to the hospitals, and consequently the proportions of severe and fatal cases were larger there than amongst the population as a whole " Then dealing in the same way with the fatality of the cases in hospital taking all ages Taking children aged 0 10 "For each individual vaccinated child 0 10 years of age suffering from a fatal attack of smallpox, 22 4 unvaccinated children died of that disease " Taking persons from 10 to 20 years of age "For each individual vaccinated person 10 to 20 years of age suffering from a fatal attack of smallpox, 12 unvaccinated persons of similar age died of that disease " Then as to persons from 20 to 30 years "For each individual vaccinated person aged from 20 to 30 years of age suffering from a fatal attack of smallpox, 4 1 unvaccinated persons of similar age died of that disease "

(*To be continued*)

SOCIETY PROCEEDINGS

American Association of Obstetricians and Gynecologists

Ninth Annual Meeting held in Richmond, Va , Sept 22-24, 1896

FIRST DAY—MORNING SESSION

The Association was called to order at 10 A M by the President, Dr JOSEPH PRICE of Philadelphia

After the usual preliminary exercises, the reading of papers was proceeded with

Dr JOHN M DUFF of Pittsburg, read a paper entitled

PELVIC DISEASES AND THEIR PRINCIPAL CAUSES, WHAT SHOULD THE LAITY BE TAUGHT CONCERNING THEM?

He said that notwithstanding the fact that some of the prominent members of the medical profession had, in talks to the galleries, held the gynecologists up for ridicule and criticised them severely, he did not think any apology was due either the profession or the public for the character, or results of pelvic surgeons Those members of the profession who had been devoting themselves to the care of diseases peculiar to women had in the face of revilings and professional and public prejudice worked patiently and persistently until they were now obtaining results of which they may well feel proud, results far beyond what the most sanguine expectations of the hardy pioneers of a quarter of a century ago led them to hope for They were to day charged with irrational radicalism, with an operative mania, which was gratified without a proper consideration of the ultimate benefit to the patient Entreatingly they were urged to adopt more conservative measures and thus stop the wholesale mutilation which was going on at present, which it is claimed is neither scientific nor humane Sentiments such as these, endorsed by men of reputation were eagerly taken up by the lay press as sensational news and advertised by pretenders as an endorsement of their methods of practice, and thus the laity, in the opinion of Dr Duff are taught false notions regarding the nature of pelvic diseases and their treatment That there is a great amount of mutilation connected with pelvic surgery, he would not deny but that regular pelvic surgeons were guilty of reckless despoliation was not, he thought, susceptible of cons could scarcely be held accountable for eral practitioners, and for the work of ignorant egotists and pretenders, who with brazen effrontery undertake operations of which they are not qualified by character or education, the pelvic surgeons disclaim all responsibility

During the period of the evolution and upbuilding of pelvic surgery no doubt much of the work was crude, and perhaps too much was done by over zealous operators That at this day, through mistaken diagnosis operations are sometimes needlessly performed, no one would have the hardihood to deny, but that such cases are as frequent as some critics say they are, Dr Duff could not believe He said the true pelvic surgeon was governed by nobler purposes, by more elevated aims Conservatism in its true sense, the saving of life, relief from pain and the curing of the patient, was his watchword Dr Duff then dwelt at length upon various pathologic conditions which demand the attention of the pelvic surgeon

Dr **Walter B Dorsett** of St Louis, followed with a paper on

DECEPTIVE SIMILARITY OF SIGNS AND SYMPTOMS OF INTRA-ABDOMINAL DISEASE, WITH CASES

In order to arrive at a conclusion and to formulate a diagnosis in a given case, be it medical or surgical, the practitioner must exercise care and judgment in the consideration of such signs and symptoms as are presented Each should be weighed, and mental annotations taken as to their value individually and collectively

Dr Dorsett directed attention to the importance of the family and personal history of patients, to the pulse and temperature, the knoweldge to be gained by manual examination the use of analgesics, etc

Regarding the exploratory incision, it should not be regarded as an evidence of ignorance, but as a legitimate means of diagnosis, and the off hand diagnostician, or the surgeon who never makes mistakes, should be looked upon with, at least, a grain of suspicion To illustrate his statements, three interesting cases were reported, one of which we give in full

Mrs M, aged 28, married eight years, no pregnancies, was seen by Dr Dorsett about a week after having recovered from an attack of malarial fever Temperature 99, pulse 90, tongue slightly coated and a tendency toward diarrhea Complained of general abdominal tenderness, palpation of abdomen revealed a slightly more tender spot at McBurney's point, no swelling or tumefaction could be felt A vaginal examination revealed a retroversion with fixation, no tubal enlargement nor tenderness could be made out No vaginal discharge Diagnosis Gastro intestinal irritation with chronic inflammation of pelvic contents, diarrheal mixture was prescribed and patient was told that further attendance would probably not be necessary Four days subsequently the temperature was 99 8 F, pulse 100, abdominal palpation revealed a distinctly tender spot with some swelling at McBurney's point Patient stated that she had eaten heartily of Wienerwurst the day before, and had been awakened during the night by cramps at the navel Bimanual examination was again resorted to with negative result Appendicitis was diagnosticated at this visit, first stage Dram doses of salts were prescribed, and the patient was urged to go to the hospital, but refused The next day she was seen and found sitting in a rocking chair, and aside from slight tenderness over abdomen, was feeling quite comfortable Salts acted freely Bimanual examination again gave negative results, temperature 99, pulse 100 Patient was ordered to bed and advised to keep quiet The case was regarded as better and thought to be out of danger The following day the pain became more severe and the patient came to the hospital of her own accord Upon examination the right iliac fossa was found to be exceedingly tender and fluctuating Vaginal examination revealed nothing aside from what was found at the previous examination Temperature 103, pulse 130 Diagnosis Ruptured appendiceal abscess She was anesthetized and placed upon the table and a section made in the median line The large sac was found on the right side filled with blood and clots, and when washed out a rent of the posterior layer of the broad ligament was found which communicated with another rent in the Fallopian tube Appendix perfectly healthy, and was not disturbed A thorough washing out of the sac was done and ligation of the tube with a portion of the broad ligament, a glass drainage tube was introduced Notwithstanding the utmost care, the temperature remained high, pulse became worse, the abdomen became distended, and the patient died on the third day

Postoperative diagnosis Ruptured tubal pregnancy without the usual symptoms There was no history of shock, no cessation of menstruation, or nervous symptoms of pregnancy No passage of decidua, no vaginal discharge of any kind, but in its stead a good history and train of signs and symptoms of inflammatory disease of the appendix

Dr **Rufus B Hall** of Cincinnati read a paper entitled,

THE MOST POTENT CAUSES OF PELVIC INFLAMMATION

He claimed that septic infection following labor or abortion or gonorrheal infection, was the cause in almost every instance He says there will always be some cases of septic infection following labor, which are in nowise due to infection from the attendant, injury to small pelvic tumors, etc The retention of the products of conception in abortion is a very frequent cause He advises completely emptying the uterus at once after abortion The Doctor believes the most frequent cause to be gonorrheal infection conveyed to the woman from a latent gonorrhea of her husband The more he sees of the ravages of gonorrhea, the more he is convinced of the fact that the profession is derelict in its duty to its patients in the dissemination of knowledge upon this subject The teaching of a few years ago that gonorrhea in the male could be easily and speedily cured by a little balsam of copaiba, or oil of sandal wood, with mild astringent injections, and that the patient was well as soon as the purulent discharge ceased, is false doctrine and must be corrected This must be done by the family physician Dr Hall does not stand alone when he says that he has on many occasions been compelled to remove suppurating tubes and ovaries from women who had contracted the disease from their husbands, who believed themselves well when married He has no hesitation in saying that gonorrhea is more destructive to women than syphilis, and believes it is the duty of every physician to impress upon his male patient the fact that he is not well as soon as the urethral discharge disappears He is a firm advocate of legislation upon this, believing that every man should have a certificate from the health officer of freedom from syphilis and gonorrhea before he is granted a marriage license

Dr **Henry Carstens** of Detroit in discussing the three preceding papers, said that when prominent ministers of churches consulted physicians and asked them to produce abortion on their wives he became discouraged, and thought it was love's labor lost Still the gynecologist should keep on preaching against the evils attending the production of abortion Regarding Dr Dorsett's paper, the difficulty attending diagnosis in some cases was exceedingly great The gynecologist should exhaust his diagnostic resources before resorting to abdominal section The too frequent opening of the abdomen stimulated incompetents to do likewise, and as a consequence results were disastrous, eventually reacting on gynecologists

Dr **W E B Davis** of Birmingham, Ala, does not believe that gonorrhea plays so important a part in the production of pelvic inflammation as was heretofore taught One's conception of cases of pelvic trouble depends largely upon the class of practice he has The cases met with in dispensary practice are different from those encountered in private work He believes that fully 50 per cent of the cases of pelvic inflammation are due to puerperal infection, either at the time of delivery at full term or premature delivery As to tubercular trouble, more importance is being attached to it as a cause of pelvic inflammation than it deserves Those who did considerable operative work knew that only a small per cent of cases have their origin in tuberculosis

Dr **James McFadden Gaston** of Atlanta (by invitation) called attention to the prophylactic management of cases of pregnancy prior to the period of confinement Extreme hygienic precautions might warrant in some instances the use of antiseptic washes prior to labor, but as there was a great tendency on the part of some members of the profession to resort to measures which are regarded as precautionary in the way of preparing a woman for labor and using washes in advance of confinement, it struck him this was altogether out of place, inasmuch as there was a normal condition of things, and nature should be allowed to take its course unless there were ample reasons for interference

Dr **Ernest S Lewis** of New Orleans cited a case in connection with errors that sometimes arise in the diagnosis of abdominal tumors He operated on a patient last winter for what he supposed at the time was a small ovarian tumor, but after the abdomen was opened it turned out to be a retroverted gravid uterus

Dr **F D Thompson** of Fort Worth, Texas, would like the essayists to have gone more fully into the point as to when it was safe for men to marry and have intercourse with their wives, who had been the subjects of gonorrhea Many cases of gonorrhea occurred in married men, and the gynecologist had before him all the ills and consequences incident to this disease How long shall such men abstain from sexual intercourse? These points should be dealt with more fully and explicitly

Dr **Lewis S McMurtry** of Louisville considered the view enunciated by Dr Hall as to gonorrhea and its relations to marriage impracticable Regarding the exploratory incision for diagnostic purposes, a small opening was not always sufficient The incision should be sufficiently large to allow the surgeon to thoroughly explore the abdominal cavity to detect such pathologic conditions as might be present

Dr L H **Dunning** of Indianapolis cited cases of the impracticability of making a small incision for the detection of intra abdominal pathologic conditions He favors an exploratory opening sufficiently large to make a thorough search

Dr A H **Cordier** of Kansas City, Mo , said, regarding the possibility of making diagnoses in intra abdominal pathologic conditions, that in 80 per cent of the cases this could be done by painstaking efforts

Dr **Edwin Ricketts** of Cincinnati agreed with the previous speakers that it was exceedingly difficult to diagnosticate intra abdominal lesions previous to opening the abdomen, and sometimes the surgeon did not know the nature of the growth even after the abdomen was opened Cases illustrating the great difficulty attending diagnosis of intra abdominal growths were cited

Dr E F **Fish** of Milwaukee said that while he did not believe in promiscuous exploratory laparotomy, he could recall one case in particular in which the operation saved the patient's life

Dr **Richard** H **Gibbons** of New York City thought many of the cases dealt with in the papers were due to puerperal contamination, or in some instances to laceration of the cervix, as had been pointed out by Emmet He believes that Noeggerath gave us the keynote to the class of infection produced by gonorrhea Relative to diagnosticating intra abdominal diseases, there was no particular symptom that was pathognomonic Dr Gibbons pointed out the unreliability of McBurney's point, of which so much had been said and written, and called attention to an article written by him and published in the *New York Medical Journal*

Dr **Howard** W **Longyear** of Detroit emphasized the importance of educating the laity in regard to gonorrhea He believes the teachers of our public schools should be empowered to impart the necessary knowledge regarding the dangers of this disease and its consequences

Dr **George Ben Johnston** of Richmond presented the specimen of an ovarian tumor, the first removed under Listerism in the State of Virginia so far as he had been able to ascertain The patient was an unmarried woman, 26 years of age The tumor was removed March 19, 1879 The tumor with the sac and fluid contents weighed thirty four pounds The operation was performed under the spray and with the elaborate dressings recommended by Lister, etc The patient died, however, from sepsis In November of the same year he was consulted by Mrs M , whom he presented to the Association for what turned out to be an enormous unilocular ovarian tumor Her measurements were 6 feet, 4 inches around the abdomen at the umbilicus, and 3 feet, 2 inches from the ensiform cartilage to the pubes The contents of the tumor and sac weighed ninety six pounds This operation was performed at the patient's house with the same care as that of the previous one

TUBO OVARIAN CYSTS WITH INTERESTING CASES

Dr **Albert Goldspohn** of Chicago read a paper on this subject By tubo ovarian cyst is meant a non purulent sac whose walls are composed, in variable *proportion, of* the walls of the Fallopian tubes and those of some cystic ovarian or parovarian formation with the coalescence of two or more cavities, at least one from each, into one, by a free communication The fluid contents of such a sac may be serous or hemorrhagic, or may partake in variable degree of the qualities and characteristics of the fluid contained in glandular ovarian cystomas The fimbriæ of the abdominal *ostium* of the tube may be distinguished or not upon the inner or on the outer side of the ovarian portion of the sac, or they may have coalesced with other structures to form some portion of the walls of the united sac The ovarian element in this formation can have originated from a hydropic Graafian follicle, a cystic corpus luteum, from the primordial glandular ducts of Pflueger in the ovary, or from the parovarium. In order to exclude a large number of ordinary tubo ovarian conglomerates we need to recognize the following minimum requirements in distinguishing a tubo ovarian cyst 1, the participation of the tube, which is easy enough from its position and connections, 2 to prove the participation of the ovary by demonstrating some ovarian tissues in the wall of the sac, 3, that their cavities are united by some opening through which the mucous membrane of the tube is continuous with the lining of the ovarian cyst or follicle Applying this standard the author has been compelled to exclude a number of cases that have been mentioned as such cysts, because the three points were not proven in each of the cases

The first description of a tubo ovarian cyst was given by Blasius in 1834, but the correct name was proposed by Richard in 1853, who spoke of 'kysts tubo ovariens" in demonstrating a number of postmortem specimens The total number of authenticated cases that the author has been able to find in literature is thirty eight by twenty five different authors Dr Goldspohn reported three interesting cases, and called attention to some interesting features in connection with the anatomy as influencing intermittent profluent discharges and showing the inflammatory element in their causation From a study of specimens, from the results of experience, and from the arguments of the best authors, the author deduces the following conclusions

1 Tubo ovarian cysts come to pass in consequence of a plastic inflammatory union between a Fallopian tube and the adjacent ovary, after either or both of these organs and the intervening peritoneum have experienced a non purulent pathologic change of a cystic character The septum intervening between the two lumina disappearing in consequence of pressure *atrophy from the tension of liquid confined* to one or both sides of it

2 This union of a distended tube cavity may occur also with that of a parovarian cyst (v Ott), or with that of a peritoneal pseudo cyst (Zedel)

3 In those rarer cases in which the fimbriæ are really found floating in the interior of the main cyst cavity, we must assume either the congenital anomaly of an "ovarian tube," as was seen by Schneidemahl in a mare, as a vitium primæ formationis, or that an ovarian cyst or follicle cyst ruptured, and the abdominal end of the tube dropped into the rent and was united to its edges by inflammatory action, thus making a joint cyst and tubal cavity

Dr **Walter** B **Chase**, of Brooklyn, followed with a paper entitled

MIXED TUMORS OF THE OVARY

Mixed tumors of the ovary have a peculiar interest, *for* the reason that if small, they are often difficult of diagnosis These tumors of the ovary may be made up of a variety of cysts, or may be a combination of cysts and solid growths The etiology of tumors as a whole is a matter of great importance, both in the relation to diagnosis and treatment

The question of what constitutes a tumor might be considered *with profit* Senn, *in* his *recent classical work* on the "Pathology and Surgical Treatment of Tumors,' defines a tumor as "a localized increase of tissue proliferation of embryonic cells of congenital or post natal origin " An important fact concerning true tumors is that they never disappear except by removal or destruction Benign tumors always remain local, while malignant ones are disseminated by migration or transportation of their peculiar cells, and they always originate as benign or malignant growths If the tumor matrix is made up of embryonic cells of the lowest development, there is greater liability to malignant growth, than if from tissues susceptible to the highest physiologic type of development

Retention cysts of the ovary are not tumors in a technical sense, and they never attain large size Large ovarian cysts are most often cyst adenomas and are not developed from Graafian follicles but arise from the embryonic structure

It would seem from what has been said that the genesis of simple and mixed tumors is divested of much that was misleading and contradictory and reduced to a rational basis It also demonstrates with great clearness that tumors are not only of local origin, but at their inception are congenital

The case reported, which was operated upon by the author at St John's Hospital, Aug 4, 1894, is reported by Dr H P De Forest, pathologist to the Methodist Episcopal Hospital, was a mixed tumor of the left ovary, consisting of a large cyst adenoma, containing about two gallons of clear straw colored fluid, a *dermoid intimately* united with *the* cyst-adenoma containing less than a quart of fluid, leaving true bony plates in its wall, and numerous encysted papillomas encrusted within the walls of both cysts

AFTERNOON SESSION

Dr A H **Cordier** of Kansas City, Mo , read a paper on

MOVABLE KIDNEY LOCAL AND REMOTE RESULTS

in which he drew the following deductions 1 A movable kidney often produces a dilatation of the stomach with all the accompanying symptoms of a disease of that organ 2 It is a *fruitful source of* gallstones, because of the pedicle producing a partial obstruction of the common duct. 3 The bending of the ureter often gives rise to a hydronephrosis This, in turn, is sometimes converted *into* a pyonephrosis 4 It may produce death by a complete strangulation by a torsion of the vessels and ureter 5 By dragging on the abdominal aorta and kinking the vena cava, a condition simulating an aneurysm of these vessels may be produced 6 Pain of a referred character to the region of distribution of the spinal nerves is often induced by a movable kidney's disturbance of the abdominal plexus 7 A general nerve exhaustion (neurasthenia) is often induced by the interference of this condition with digestion, assimilation and elimination 8 Nephrorrhaphy is a safe and effective surgical procedure 9 All cases of movable kidney, if accompanied by symptoms pointing to the kidney as their source should be operated on 10 In summing up the local and remote results of this now often recognized condition, the author thinks the correctness of the deductions has been frequently demonstrated by the disappearance of each and every symptom after a restoration and retention of the kidney in its normal position 11 Symptoms are not to be relied upon in making a diagnosis of movable kidney The physical examination is the only trustworthy guide

THE LIMITS OF NEPHRORRHAPHY

was the subject of a paper by Dr Hugh M Taylor of Richmond, Va He conceded the frequency of nephroptosis Since he had been systematically looking for movable kidney, he has found it so frequent in its occurrence that he no longer regards the experience of Glenard, Linduer, Edobohl and Noble as unique His opinion is equally fixed that only a small proportion of the cases met with give rise to symptoms or suffering, ill health or death, and consequently a majority of cases do not call for nephrorrhaphy He favors the classification of nephroptosis under three clinic heads

1 Patients who have displaced kidney do not know it and suffer no inconvenience whatever from it This type he thinks represents by far the largest class

2 Patients with displaced kidney, who may or may not know it, who suffer from gastro enteric discomfort and perhaps a long train of vague neurotic disturbances In this type he thinks we find the largest class calling for operative interference

3 Patients with movable kidney, who are subjects of occasional or frequent mild or severe attacks of renal crises This last mentioned is he thinks the least frequent type met with, but the urgency of the symptoms more frequently demands operative interference

Nephrorrhaphy for the relief of gastro enteric disorder is limited by our ability to tell to what extent the disorder is due to renal ptosis per se or to enteroptosis, or to some one of the many well known etiologic factors of gastro enteric disorder Nephrorrhaphy for the relief of the condition of Deitl's or renal crises must be limited by one's success in differentiating between this condition and that of gall tract, appendicular and kidney colic due to nephrolithiasis He accepted as logically sustained the conclusion that the Deitl s or renal crises is due to a kink or twist of the ureter with retained urine in the ureter and pelvis of the kidney Apart from the violent paroxysms of pain (the renal crises) the tendency of ureteral twist and urinary obstruction to induce hydronephrosis and in exceptional instances pyonephrosis, rendered operative interference more imperative in this class of cases His protest was not against nephrorrhaphy, but only its abuse He conceded the value of operative interference in many selected cases but deprecated the tendency toward operative interference merely because the kidney is movable

Dr George Ben Johnston of Richmond, Va, said that some years ago his attention was called to the subject by encountering several cases of movable kidney that had been unobserved either by him or the physician who preceded him in the treatment of these cases for obscure nervous and gastro intestinal disturbances, and when he observed the similarity of symptoms in the first three cases which he saw, he was obliged to associate those symptoms with the presence of movable kidney He prevailed on these women to be operated upon for movable kidney and in all three cases the results were most gratifying

Dr L H Dunning of Indianapolis, was greatly interested in the subject, for the reason that in 1880 he resorted to operative procedures for the cure of floating kidney, and in connection with this work he sought to determine if possible some of the causes which led to movable kidney He emphasized the importance of differentiating between floating and movable kidney, the former being always congenital, the latter acquired to a greater or less extent He found by his investigations that the partially fixed condition of the kidney depends upon three or four causes, the two principal ones of which were its position behind the peritoneum, and second the fact that it had an envelope of cellulo adipose tissue A little further investigation showed that the perinephritic cellulo adipose tissue was composed of two parts, one fixed, the other movable The normal kidney had a range of motion of from one half to three quarters of an inch in its fatty envelope

Dr Thos B Eastman of Indianapolis, reported the case of a woman, 25 years of age, who came to him with the symptoms of appendicitis She also had considerable albumin in the urine Operation showed that the appendix was firmly adherent to the kidney It required considerable force to liberate it As soon as liberated the kidney bounded back into place as though it were rubber The appendix was removed, the albumin in the urine ceased, and the woman made an uneventful recovery

Dr James McFadden Gaston of Atlanta, directed attention to the possibility of movable kidney being mistaken for enlarged gall bladder The gall bladder is capable of being pushed back into the lumbar region and carried around in front in just the same manner as a floating kidney It behooved gynecologists to look into this phase of the matter

Dr W E B Davis of Birmingham, had seen a number of cases of movable kidney, and said that at the Charleston meeting of the Southern Surgical and Gynecologic Association there was quite a difference of opinion as to the frequency of the condition He believes that movable kidney is a condition which does not require in all cases operative interference Of the number of cases he had seen he had only operated on a few

Dr I S Stone of Washington, D C, related the case of a woman who, after the operation of nephrorrhaphy had been performed, gained twenty five pounds in flesh In many instances this procedure brought color back to the cheeks of patients and made them feel well He had never seen such gratifying results from any other operation in surgery except perhaps from the removal of an ovarian tumor The patients made rapid improvement after the operation

Dr Joseph Price of Philadelphia, said his experience was somewhat limited in operating for movable kidney The improvement in the condition of patients so operated upon was rapid, but there was such a thing as operating too much upon cases of movable kidney

Dr J Henry Carstens of Detroit, said the line should be drawn between movable and floating kidney The trouble which arose from floating kidney consisted of a twisting of the ureter and consequent obstruction

Dr Richard H Gibbons of New York, detailed an operation which had been devised and recommended by a foreigner for holding the kidney in place in its newly made position

TREATMENT OF PERIUTERINE SEPTIC DISEASES

Dr W E B Davis of Birmingham, Ala, read a paper on this subject Only recently has the extremely radical procedure of hysterectomy been practiced in this country for septic diseases of the internal genitals A wave which had its origin in Paris at the hands of Péan, aided by Richelot, Segond, Jacobs and others, reached our shores three years ago and has found a considerable following among our leading operators The claim is made that there is no use in leaving the uterus behind after the removal of the appendages, in every operation for septic diseases of the female generative organs which demands the removal of the tubes and ovaries, hysterectomy should also be performed, unless there are plain contraindications forbidding it

It should be the aim of the surgeon to preserve everything consistent with thorough surgical work, and not to sacrifice important organs because it can be done with only small mortality We are told that the uterus has no function after the removal of the appendages, but this has not been demonstrated, and on the contrary we know that the sexual life of the woman is very much better preserved by leaving the uterus, and that the mental effect is also much better A slow convalescence, or even a second operation is preferable to its removal unless very much diseased It is a reflection on the correctness of the reports of complete recoveries of such a large per cent of the cases by most excellent surgeons, when the uterus was not removed, to accept the argument now being made in favor of hysterectomy in all these cases As stated by Dr Davis at the last meeting of the American Medical Association, he could not agree with Dr Sutton and others that pus in the tubes was due to gonorrhea in 75 per cent of cases He thought that puerperal infection was rarely the cause of more than 50 per cent Tubercular infection was rarely the cause and was not so important as he claimed However, the importance attached to gonorrhea was against the argument for the removal of the uterus, as the infection from this source was not deep and could be removed with the curette Because some patients were not completely cured by the removal of the appendages was no argument for hysterectomy in every case where the bilateral operation was required, for nearly all these could be relieved by a thorough curettage Some large uteri would require in addition to this a high amputation of the cervix, and only a small number would need a hysterectomy

Vaginal incision for the drainage of pus in the pelvis, not confined to the tubes, was a most valuable method of treatment in a well recognized class of cases, and had been practiced for a long time with gratifying results A large number of these cases require no further surgery More recently large pus tubes and ovarian abscesses had been incised and drained through the vagina with permanent recoveries in a good proportion of cases The uterus should always be curreted at the same time These were the very cases where the vaginal operation and hysterectomy had been recommended so highly by the French surgeons Yet a considerable per cent of these cases could be relieved by vaginal incision and drainage The object of the surgeon should be, not so much toward still further reducing the death rate from the operation, but to relieve the cases and preserve as far as possible organs which had so much to do with the woman's health and happiness

Dr L H **Dunning** of Indianapolis followed with a paper entitled

SHALL HYSTERECTOMY BE PERFORMED IN INFLAMMATORY DISEASES OF THE PELVIC ORGANS

The author discussed only that form of inflammation of the pelvic organs and tissues denominated diffuse pelvic inflammation, and drew the following conclusions

1 We recognize the utility of hysterectomy in a small percentage of bilateral suppuration of the tubes and ovaries in which the uterus is distinctly septic, and in cases of septic uteri which can not be cured by other means after bilateral salpingo oophorectomy

2 We oppose hysterectomy as a rule in inflammatory diseases of the pelvic tissues upon the following grounds, viz (*a*) The uterus is the central organ of the reproductive system and should not, except upon palpable and urgent cause be extirpated (*b*) It is only in rare cases that the uterus is so far diseased as to resist the curative effects of appropriate treatment (*c*) The removal of the uterus profoundly affects the nervous system and emotional nature of young women deprived of this organ (*d*) We oppose the removal of the uterus from anatomic reasons, to wit As a result the vagina is shortened, the anatomic relations of the bladder, sigmoid and rectum are changed, the elasticity of the pelvic diaphragm is greatly diminished or entirely removed, the elastic tissue being largely replaced by sensitive scar tissue (*e*) In married women it often disturbs the sexual relations of husband and wife and is apt to induce mental depression (*f*) Vaginal hysterectomy compels the use of drainage because of the necrosis of tissue and suppuration induced

SHALL THE UTERUS BE LEFT IN SITU IN EXCISION OF THE ADNEXA?

This paper was read by Dr E F **Fish** of Milwaukee, Wis The paper was a general defense of the uterus and an argument in favor of leaving it in situ, if sound, after excision of the appendages It takes up and considers the pathologic conditions requiring hysterectomy after salpingo oophorectomy, as well as the conditions which do not require it The author argues against all operations which leave a degenerate uterus, such as Hegar's, Tait's, Martin's and Robinson's, except under extreme conditions, and concludes thus 1 That whenever it becomes necessary to excise the uterine adnexa, if the uterus is sound, leave it 2 Whenever we excise the tubes and ovaries, and the uterus, though in a pathologic condition, in our judgment will yield to treatment, leave it 3 Whenever it is necessary to do an abdominal hystero salpingo oophorectomy and the cervix is healthy, do a supravaginal amputation, as this leaves the vaginal vault intact 4 Whenever it is necessary to do a supravaginal amputation, suspend the cervix to the stumps of the broad ligaments, or anchor it to the abdominal wall to prevent prolapsus vaginæ (Baldy) 5 Whenever it is necessary to do a general ablation, and the cervix uteri is unsound take the entire organ because of the danger of carcinoma 6 Whenever a subserous or interstitial myoma can be removed without too great damage to the uterus, do a myomectomy and leave the organ 7 Whenever we excise the appendages and leave the uterus, ventral fixation is not an unsurgical operative conclusion

The author's reasons for leaving the uterus were 1 That it helps to maintain the woman's sexual integrity 2 It relieves the patient of much mental strain and is a prophylactic measure to neurasthenia, melancholia and insanity 3 It tends to maintain the family ties unstrained 4. It obviates the possibility of vaginal hernia, cystocele and proctocele and delays vaginal atrophy, and last of all, it holds up and prevents shortening of the vagina

A spirited discussion followed the reading of the above there papers, and was participated in by Drs L S McMurtry John M Duff, Joseph Price, J Henry Carstens, Albert Goldspohn, George H Rohé, James F Baldwin, A B Miller, Walter P Manton, J W Bovee, Rufus B Hall, W E B Davis, E F Fish , some favored the abdominal and some the vaginal route

Second Day—Morning Session

Dr J W **Long**, of Richmond, Va , contributed a paper entitled

DYNAMIC ILEUS

Intestinal obstruction had been variously classified, but Dr Long regarded the classification adopted by Murphy as the simplest and the most rational 1 Adynamic ileus, always the result of intestinal paralysis, due to varying causes, may be clearly illustrated by such cases as those following injury to the spinal cord and paralysis due to peritonitis 2 Dynamic ileus This variety formed the subject of the paper and was discussed in detail 3 Mechanical ileus embraced such common lesions as strangulated hernia, intussusception, fecal impaction etc

We report one of Dr Long's cases herewith Mrs C , was brought to him on Mav 27, 1896 She is 21 years old, married three years, but never pregnant She is rather below the medium size and height In temperament she is of the spoiled child type not hysterical but rebellious It was with great difficulty that she could be induced to have any local treatment or even take her medicines After admission to hospital her obstreperous disposition required all the tact and firmness of a sagacious nurse Early in April of this year the patient had malaria followed by delayed menstruation, pelveo abdominal pain and obstinate constipation The malaria and menstrual disturbance yielded promptly to treatment, but the abdominal pain continued and gradually the ileus symptoms became more and more pronounced After exhausting every other measure to move the bowels the patient was given chloroform and by means of a Rickett's tube he succeeded in washing away a quantity of fecal matter Notwithstanding there was no improvement, the nausea and vomiting recurred oftener and were more distressing, the pain and tenderness became worse and a marked degree of tympany supervened When she was brought to the hospital there had been no movement of the bowels for four weeks excepting what was washed away with the colon tube while the patient was anesthetized The history justified the diagnosis of intestinal obstruction, while the urgent symptoms demanded an immediate operation The abdomen was opened by a median incision No mechanical obstruction could be found, although a careful search was made along the whole length of the intestine The bowel was moderately distended with gas and congested A singular feature, however, was that at three points, two in the ileum and one in the sigmoid flexure, the canal was constricted sufficient to constitute obstruction In the ileum one of the constrictions was about 15 inches from its lower end and 6 inches long, the other was nearer the jejunum and about 4 inches long The lumen was not entirely closed at either point, but was greatly reduced, being less than half the normal size, while the diameter of the remaining portions of the bowel was increased on account of the distention with gas No peristalsis was observed, but the contracted portions could be dilated by "milking," the intestinal contents along In the sigmoid the limitations of the contracted portion were not so sharply defined, but the lesion was just as evident The walls were thickened and the caliber much diminished Incidentally a small ovarian cyst on the right side was discovered and removed As the intestine had been handled a good deal the abdomen was flushed with normal salt solution The incision was closed with two tiers of sutures, silk for the peritoneum, and interrupted silver wire for the remaining layers The recovery was most satisfactory in every way The bowels responded to the usual laxatives and enemas on the second day, and from the first to last there was not a hitch in her convalescence The patient left the hospital in four weeks and three weeks thereafter took a trip to Alabama There could be discovered no evidence of lead or ptomain poisoning

SPONTANEOUS RUPTURE OF UTERUS DURING LABOR AT TERM, WITH SPECIMEN

A paper on this subject was read by Dr B M **Hypes**, of St Louis

Mrs O aged 31, of German parentage, general health good previous to birth of first child No history of any constitutional disease About one year after marriage aged 26 years was delivered of a seven and one half months child which lived but a few minutes This labor was easy, lasting about six hours The midwife in attendance failed to get the after birth which was removed by the family physician twenty hours after the birth of the child by means of his hand and the curette The woman then suffered for six weeks with a severe case of metro peritonitis From this time her health remained impaired, and for the next few years she was a sufferer from general debility, impaired digestion, and a "sore spot" in the hypogastrium Four years from the birth of her first child she again became pregnant During gestation, her general health was much improved She exhibited no functional disturbances, her only complaint was the sore spot over the fundus of the uterus and to the right of the median line Labor pains began Sept 16, 1895, at 10 P M, at full term The family physician was called, found labor in progress, vertex presentation, with normal condition of mother and child The pains were slight and progress slow At 2 A M, September 17, he gave a dose of morphin and went home At 9 A M, upon his return he found the patient comfortable, with occasional slight labor pains He left the house with injunction to call him when signs of labor became pronounced Patient remained quiet during the day Suddenly at 3 P M, she was seized with violent vomiting, followed by the most excruciating pains in her abdomen associated with rolling and tossing in bed, gasping for breath, faint feelings, pallid face and rapid exhaustion, in short, the usual symptoms of abdominal shock The family physician was at once sent for and upon his arrival, at 4 P M found her in complete collapse with convulsive seizures The symptoms, with vaginal and abdominal examination, revealed to him this dreadful condition The presenting part receded, the womb empty, and the child plainly felt in abdominal cavity The patient had suffered spontaneous rupture of the uterus He at once dispatched for surgical aid, but by the time the surgeon, Dr Meisenbach, arrived, the patient was moribund Still with the hope of saving the child, laparotomy was hastily performed, and the child, which had escaped entirely into the abdominal cavity, was extracted from a mass of blood and amniotic fluid It had ceased to live, and continued efforts at resuscitation failed to cause it to breathe The child was fully developed, male, weighed six pounds, and was 18 inches long The uterus, when removed from body, presented the following condition A rupture through fundus superiorly, extending from half an inch from the entrance of one tube to an equal distance from the entrance of the other, the walls, at place of rupture, were comparatively thin Placenta located at middle third of uterus, anteriorly and to the right, where the walls were much thickened Vaginal portion of the cervix almost obliterated as at term, and dilated for the ready admission of two fingers The lower zone of the uterus exhibited no thinning or formation of Bandl's contraction ring, no disease of tubes, ovaries, or placenta A microscopic examination was made soon after rupture and revealed fatty degeneration of tissue at point of rupture The points of unusual interest in the case are the cause of the rupture, and its location at the fundus uteri

Dr EDWIN RICKETTS of Cincinnati Ohio, read a paper entitled

PORRO'S OPERATION AT OR NEAR THE FIFTH MONTH FOR SMALL FIBROID OF CERVIX, ACCOMPANIED BY HYDRAMNIOS AND TOTAL RETENTION OF URINE

The author reported the following case and briefly commented on it

Mrs M, white, aged 26, of short stature, mother of two children of 6 and 3 years of age, with an abortion at 8 weeks early in 1895, no specific history, and a patient of Drs J B and C M Warwick, of Lucasville, Ohio Drs Warwick first saw her on Jan 10, 1896, finding that she menstruated last in the first week of November, 1895 They also found the uterus enlarged and firmly bound down in the pelvis, especially to the left, and extremely tender to pressure There was uterine hemorrhage in March, 1896, and again in the following month lasting for twenty four hours Her labors and abortion were prolonged and severe and accompanied by great suffering, while dilatation in all instances was accomplished with difficulty From Jan 10, 1896, she had no desire to urinate, nor could she void a drop of urine without the aid of the catheter Feb 23, 1896, she had severe labor pains lasting thirty six hours and accompanied by slight hemorrhage, the right portion of the cervix being soft and the left hard, which condition was also present at the time of operation During April and until May 22, the date of operation, she was very tender over the lower part of the abdomen, and at times had a temperature above 100, with a pulse running from 90 to 100

Dr Ricketts saw her in consultation at her home April 8, 1896, when for the first time motion of the fetus was barely perceptible May 22, Drs Warwick, Kline, Sellards and Ricketts found her abdomen larger than it should be at full term, which was due to the hydramnios present There was no difficulty in moving the fetus freely in the abdominal cavity, so thin was the uterine wall It was considered unwise to delay surgical interference, and a Porro was therefore performed under as strict asepsis as the circumstances would permit

After the abdomen was opened, Dr Ricketts passed his hand down into the pelvis breaking up the pelvic adhesions Upon the delivery of the fundus of the impregnated uterus through the abdominal incision, a rubber ligature was thrown around it low down and tight enough to control any hemorrhage which might occur The fluid which escaped upon opening the uterus surpassed in amount any he had seen delivered per viam naturalem After carefully sponging the parts, the wire was tightly adjusted below the rubber ligature by means of the Koeberle clamp, and the rubber ligature then removed After the delivery of the placenta, the fundus was amputated, leaving the ovaries and tubes intact The abdominal wound was closed with silk worm gut sutures, without stitching any tissue to the stump below the wire No drainage tube was used The extra peritoneal part of the stump was dressed with gauze, moistened in glycerin and tincture of iron, the stump being held up by the double hooded pin of Tait The placenta and fetus were small for near five months gestation, and the cord was tied in almost a hard knot, harder than any he had seen The fetus had marked cyanosis and gasped but once Recovery of the mother was satisfactory

TREATMENT OF PUERPERAL INFECTION

Dr H W LONGYEAR of Detroit, read a paper on this subject He first spoke of the prophylaxis and under this head of the difficulty of securing reliable statistics regarding puerperal mortality of patients under the care of midwives in this country The prophylaxis was divided into general and specific He spoke of the treatment of infection from abortion and from childbirth at full term, and presented an instrument for use in removing the remains of secundines from the uterus, designed by him He also exhibited a self retaining drainage tube of his own invention and demonstrated its applicability He reported two cases of puerperal infection treated successfully by the use of diphtheria antitoxin serum He condemned the performing of hysterectomy for puerperal septicemia except in very exceptional cases

(To be continued)

The American Public Health Association

[Special Correspondence of the JOURNAL]

The Twenty fourth Annual Meeting of the American Public Health Association held at Buffalo N Y, Sept 15-18, 1896

(Continued from page 766)

WEDNESDAY—MORNING SESSION

After the customary announcements by the chairman of the Local Committee of Arrangements, the daily report of the Executive Committee was made by the Secretary presenting the names of forty additional applicants recommended for membership, who were thereupon elected

The roll of the Advisory Council, which consists of one member from each State, Territory, the District of Columbia, the Army, Navy and Marine Hospital Service of the United States, the Dominion of Canada and each of the Provinces, and from each state, territory and the Federal District of the Republic of Mexico, eighty one in all, was then called and vacancies filled by the President

The scientific work of the day began with the reading of the Report of the Committee on Disposal of Garbage and Refuse by the chairman, RUDOLPH HERING, C E of the City of New York The elaborate nature of this admirable exhaustive report precludes any epitome giving a correct idea of the subjects of inquiry Cities were considered in three classes 1, the large, those over 100,000 population, 2, the medium, those numbering between 40,000 and 100,000, and 3, the small those under 40,000—and the various methods of disposing of garbarge in each, whether by cremation, by filling in and ploughing into the land, by dumping into the sea, lakes or rivers, or by being fed to animals, were considered with reference to cost and satisfactory results The cost ranged from 75 cents to 2 cents per capita, according to population and the method of disposal The reduction process in use in about ten cities varied from 15 to 67 cents per capita Regarding cremation, the expense was, in large cities from 2 to 6 cents, medium cities 6 to 10, and in one small city 20 cents During the past year, contracts have been made for the introduction of crematories and one reduction plant in New York City, at a cost of $90,000 or 6 cents per capita The committee have been awaiting final results from experiments in Berlin and Hamburg before arriving at definite conclusions, and, therefore, asks to be continued

Papers followed on the "Disposal of the Garbage and Waste in the Household" by Colonel William F Morse of the city of New York, another entitled "A Plea for the Domestic Disposal of Garbage," by Dr N E Wordin of Bridgeport, Conn, member of the State Board of Health of Connecticut, and on "The Disposal of Household Garbage and Excrement," by Major William S Tremaine, of the Medical Department of the U S Army (retired) They were all based on the drying, cleaning or combustion of waste by the kitchen range or attachments to the stovepipe This group of papers elicited a very lively discussion, participants being limited rigidly to five minutes Dr Gihon, U S Navy, began by suggesting the proper way of disposing of at least one half the garbage was to eat it instead of throwing it into the "swill pail," and instanced the custom in France and Switzerland of making palatable dishes of surplus food as a wiser and more economic course than throwing it away Surgeon General Sternberg, U S Army, spoke of the necessity for the prompt disposal of garbage, because of the danger of dissemination of putrescent matter by house flies Many mysterious cases of diarrhea and typhoid fever are due to direct contamination of flies, and cases of cholera have been caused in the same way Dr Clark agreed with Dr Gihon that the American people cooked more food than they can eat and consequently wasted it Dr Lee introduced Dr Varian, President of the Health Board of Titusville, Penn, who described the method of burning garbage in that city, where natural gas is the only fuel Dr Carter of Detroit, said if the fluid part of garbage is poured off, all the rest can be burned in the ordinary fire box Dr Mitchell objected to the endorsement of Major Tremaine s proposal to cremate excrement, as this had been known to produce typhoid contamination Dr Durgin of Boston, said that of the two kinds of waste material that collected out doors and that in the house, the latter must go through fire to be purified He advocated plants situated at various sites in the city to have as short a haul as possible and he did not think the duty of removing household garbage should be imposed on the city Dr Howe of Buffalo, referred to flies as filth disseminators He said that if people were required to pay for the removal of garbage as they do for their gas, they would not make so much Dr Daniel Lewis, President of the State Board of Health of New York, advocated curative stations every few blocks for the removal of garbage instead of casting it over the whole city Dr A N Bell of Brooklyn insisted on the necessity of compelling citizens to dispose of their garbage in their own homes and at their own expense

The report of the committee on "The Transportation and Disposal of the Dead" was read by the chairman, Dr Charles O Probst, Secretary of the State Board of Health of Ohio, and was following by a paper on the "Quick or the Dead" by Dr Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, in which the claims of living over the dead were set forth Dr Durgin of Massachusetts, recommended a steel casket for deceased bodies and Dr Smart U S Army, spoke of the contamination of the soil of cemeteries from dead bodies

AFTERNOON SESSION

A paper on "Measures for the Prevention of Blindness," was read by Dr Augustin Chacon, vice president of the Ophthalmologic Society of Mexico, and delegate from the State of Aguascalientes Mexico

Dr Lucien Howe of Buffalo, said that a large proportion of the diseases inducing blindness is preventable, but only preventable when attended to early, and they are not attended to early because the persons who have them in charge are apt to say that they amount to nothing and the cornea is ulcerated through before they become subjects of treatment The law ought to require every case of infantile ophthalmia to be reported at once to some legally qualified practitioner This is done in some States, but in others, as North Carolina, it was found it could not be passed because it affected midwives He offered two resolutions on the subject which were referred to the executive committee Dr Valentine spoke on the same subject, advocating Credé's method of prophylaxis

A paper on "Miasmatic Fevers in the State of Sonora,' by Dr Alberto G Nonega, delegate from the State of Sonora Mexico, and one entitled a "Summary of Sanitary Legislation in the State of Mexico," by Dr Maximiliano Alvarez, delegate from that State, were read and followed by the Report of the Chairman of the Committee on National Health Legislation, Dr Henry P Walcott, president of the State Board of Health of Massachusetts, which was read by Dr Wingate of Milwaukee, a member of the committee

The proceedings were at this point interrupted to permit the introduction and customary reference to the Executive Committee of resolutions offered by Dr Coventry of Windsor, Ont, declaring as the sense of the Association that boards of health should be absolutely independent of political considerations influencing their appointment or conduct, and by Surgeon General George M Sternberg, authorizing the secretary to receive subscriptions for a monument in the city of Paris to Pasteur, which brought Medical Director Albert L Gihon, U S Navy, who is chairman of the Rush Monument Committee, to his feet, with an amendment substituting the City of Washington for Paris, and the name of Benjamin Rush for that of Pasteur

Papers entitled 'Obiter Dicta Concerning Sanitary Organization," by Dr A Walter Suiter of Herkimer, N Y, "Some Thoughts Relative to National Health Legislation," by Dr U O B Wingate of Wisconsin, and "On the Sanitary Administration of Unincorporated Districts," by Dr Henry Mitchell of Trenton, N J, were then successively read by their authors Dr Mitchell proposed that the sanitary authority in each township should be exercised by one individual, that each local officer should hold office for five years, that examinations of candidates for appointment should be by State boards of health, and appointments only made from a list of persons recommended by the State boards, that removals should be made only for cause, and that the local health officer should be paid by the governing body for his services

Dr C E Holgate of New Haven, said, that laws covering these points had already been enacted in Connecticut, and Dr Caverly of Vermont, added that State to the list of those having a county organization of health officers Dr Jones of Greenwich, Conn, recommended the establishment of a College of Preventive Medicine Dr Bryce of Toronto, spoke in behalf of the measures recommended by the committee Dr Lee of Philadelphia, explained the reasons for the delay in sanitary organizations in Pennsylvania Dr Carter of Des Moines, said that there were three thousand local health boards in Iowa with as many physicians as health officers These are all subordinate to the State board of health and he believed that all State boards should be similarly subject to a National board of health Dr Daniel Lewis of New York, was of opinion that the committee should be one of investigation and not one to make recommendations and he doubted whether a resolution could be passed in this Association in favor of a controlling National board of health Dr Mitchell submitted a resolution on the subject of his paper, which went to the executive committee

The report of the "International Committee on the Prevention of the Spread of Yellow Fever" was then read by the chairman, Dr Felix Formento of New Orleans, followed by a paper entitled "Contribution to the Study of Yellow Fever from a Medico geographic Point of View,' by Dr Eduardo Liceago, president of the Association and a second "Contribution to the Study of Yellow Fever Epidemic in Cordoba," by Dr Gregorio Mendizabal, delegate from the State of Vera Cruz Dr Formento's resolution recommending a memorial from the President of the United States to the Spanish American countries which are permanent foci of yellow fever, was referred to the executive committee

It had been the intention to hold no evening session but the desire to hear the paper ' On Isolation Hospitals" by Dr John L Leal of Paterson N J, was so great that a recess was taken until 8 P M, when it was read and discussed by Dr Lindsley of New Haven, Dr McShane of Baltimore, who exhibited plans of the new isolation hospital of that city, Dr Barnes of Boston, Dr Plunkett of Nashville, Dr Wright of New Haven, Dr Probst of Columbus, Ohio, Dr Woodward of Washington, D C, Dr Hibberd of Richmond, Ind Dr Gihon of U S Navy, Dr Durgin of Boston and Dr Woodhull of U S Army, the Association adjourning at 10 P M, to attend a reception by the Ellicott Club

The Mexican delegates celebrated the eighty sixth anniversary of the Declaration of Independence of the Republic of Mexico (Sept 16, 1810) by a banquet at the Iroquois Hotel, and later joined their fellow American and Canadian members at the reception at the Ellicott Club

Thursday—Morning Session

The meeting having been promptly called to order by the First Vice President, Dr Woodhull the daily announcements of the Local Committee of Arrangements was made by Dr Lucien Howe of Buffalo, and the Treasurer Dr Henry D Holten of Brattleboro, Vt, presented his annual report which was referred to the Auditing Committee

The funds on hand Sept 23 1895 amounted to	$ 74 [illegible]
Received from sale of Transactions	11 40
Received from membership dues	207 60
Received from advertisement in volume	118 00
	$[illegible] 48

Expenditures for reporting proceedings, publication of volume, expenses of Secretary and Treasurer's offices expressage, postage and printing of early volumes of Transactions to complete sets, amounted to	$1,522 96
Leaving a balance in the treasury of	$1,362 92
The unexpended balance of the "index fund," for indexing the early volumes is	$493 48

The Secretary reported from the Executive Committee, with its recommendation of passage, the following resolutions, which had been referred to it

1 That the Treasurer be authorized to appoint an assistant treasurer for Mexico

2 The resolution of Dr Smart, U S Army, to appoint a special committee of five members to consider and report upon some method by which international arrangements may be effected to prevent the transmission of infectious diseases from one country to another

3 The resolution of Dr Coventry of Canada, amended to read, that the Association views with pleasure the growing tendency of many States and Provinces not to manage and control the bureaus of public health by political partisans, and not to exclude from office sanitarians who may differ politically from the party temporarily in power From a scientific standpoint, as well as in the best interests of public health, we welcome this tendency and take this opportunity to place our selves on record by declaring that it is conducive of the best interests of public health to ignore political lines in the formation of State, Provincial and other boards of health, and that a copy of this resolution be sent to the Secretaries of State of all Federal, State and Provincial governments of the countries represented in this Association

4 The resolution of Dr Wingate of Wisconsin, amended to read, that it is the sense of this Association that the Committee on National Health Legislation be continued and that efforts be continued to influence the Congress of the United States to establish a Department of Public Health at Washington, D C

5 The resolution of Dr Liceaga of Mexico to constitute a special committee of five to study the periods during which each contagious disease is transmissible and the term during which any person, who has suffered from such disease, is dangerous to the community

6 The resolution of Dr Howe of Buffalo—"Whereas, about one fifth of all the inmates of schools and asylums for the blind are there because of having suffered from purulent ophthalmia in infancy, and whereas, the ravages of this disease can be controlled in almost every case if proper treatment is begun promptly, and whereas, most of this blindness is due to the wilful or ignorant neglect of nurses and midwives, thus causing unspeakable misery to the innocent victims and great yearly cost to the State treasury,

"*Resolved*, That this Association heartily approves of the laws already enacted in several States which compel midwives and nurses to report these cases, under heavy penalty immediately to legally qualified practitioners or to proper officers of local boards of health, and *Resolved*, That this Association recommends and urges the adoption of similar laws in other States of the Union or elsewhere wherever practicable "

All which were unanimously adopted

The Secretary reported the names of twenty five additional applicants for membership recommended for election and who were accordingly elected, after which the scientific work of the Association was begun and continued in the following order Report of committee on "Pollution of Water Supplies," by Major Charles Smart, Washington, D C, Chairman, report of committee on "River Conservancy Boards of Supervision," by Dr Peter H Bryce of Toronto, Secretary of the Provincial Board of Ontario, Chairman, report of committee on "Protective Inoculations in Infectious Diseases," by Dr Charles N Hewitt of Red Wing, Minnesota, Secretary of the State Board of Health of Minnesota, Chairman

At this point Vice president Woodhull interrupted the proceedings to read a telegram just received from the medical attendants upon the Second Vice president, Dr Henry Sewall of Denver, Colorado who was prevented from being present by a serious attack of typhoid fever The telegram was in reply to one of sympathy sent by the Association on Tuesday upon motion of Dr Montizambert of Canada and informed the Association that his case was progressing favorably and thanking it for the interest expressed

A paper on "The Serum Diagnosis Test for Typhoid Fever," by Dr Wyatt Johnston of Montreal, presented a modification of the serum diagnosis test introduced by Vidal, which Dr Johnston had found expeditious and satisfactory A paper on the "Prophylaxis of Typhoid Fever," was read by Dr J Eliot Woodbridge of Cleveland, Ohio, who stated that the flow of the lake front of the city, which was originally clear white sand over a sub stratum of clay, had in the course of recent years been covered by a progressively increasing layer of slime several feet thick He declared that for every case of typhoid a city government is morally responsible, as all cases can be traced to bad sewerage or polluted water The paper was discussed by Drs Carmona y Valle of Mexico, Cerna of Texas, Kinyoun of U S M H S, Learned of Massachusetts, and Bailey of Kentucky

Dr Durgin of Boston, offered a resolution deploring the passage by Congress of a law preventing experiments upon animals, which was referred to the executive committee

The next series of papers excited the greatest interest and elicited discussions and inquiries propounded by members to the authors "Practical use of Formic Aldehyde as a Disinfectant," by Prof Franklin C Robinson of Maine, "A Convenient Lamp for Generating Formaldehyd Gas," by Dr A E DeSchweinitz, Washington, D C, "Preliminary Note on the use of Formaldehyd for Room and Car Disinfection," by Surgeon J J Kinyoun of Washington, D C

AFTERNOON SESSION

Report of committee on the "Cause and Prevention of Diphtheria" was presented by Dr J J Kinyoun, of Washington, D C This was followed by papers on "Diphtheria in Chihuahua," by Dr Miguel Marquez, of the State of Chihuahua, Mexico, "On Bacteriologic Diagnosis as governing the admission and discharge of patients in Diphtheria Hospitals," by Professor E B Shuttleworth, of Toronto "On Prophylaxis of Paludism," by Dr Alfonso Ruiz Erdozain of Hidalgo, Mexico, "Paludism in the State of Morelos and its prophylaxis by Sanitary Measures," by Dr Angel Gavino, of the State of Morelos, Mexico, "Brief Notes on Public Hygiene in the State of Tamaulipas," by Dr G Garza, of Laredo, Mexico, "On Public Health in Tabasco, Mexico," by Dr Juan Muldson, of Tabasco, Mexico, "On Sanitation in Hospitals for the Insane," by Dr George H Rohe of Maryland, "Should Measles be Quarantined? by Dr Henry M Bracken, of Minnesota, report of committee on "Causes and Prevention of Infant Mortality," by Professor Charles N Hewitt, of Minnesota, "On Mortality of Infants, the Causes and Means of Diminishing it," by Dr Salvador Garciadiego, of Jalisco, Mexico, "On Diarrhea of Children," by Dr Jose M Benitez, of Guadalajara, Mexico

EVENING SESSION

Session began with the report of committee on the "Use of Alcoholic Drinks from a Sanitary Standpoint," by Dr Felix Formento of Louisiana The committee favored the moderate use of pure wines and beer, and advocated temperance and not prohibition A sharp distinction was drawn between such use and alcoholism from the abuse of ardent spirits "Spasmodic and inefficient Sunday laws" were decried and the palm for hard drinking awarded to Americans as a nation Wine producing and wine and beer drinking countries were cited as comparatively free from intoxication Coffee drinkers, according to the committee, are seldom addicted to the immoderate use of liquor

The paper was discussed pro and con by Drs Carter, Grosvenor, Bailey, Vice president Woodhull and Nelson R Hopkins

A paper was read "On the Bicycle in its Sanitary Aspects," by Dr Albert L Gihon The speaker announced that he had not set out to assail the bicycle and its ideal rider, but only the hideously distorted creature whose unnatural posture is affected by "expert" wheelmen He adverted to the serious harm to women from improper saddles, quoting from medical wheelmen in support of his statements As a mere matter of health incentive he said, pedestrianism remains unrivaled, but for those who will not walk the bicycle under the restrictions and limitations indicated may become an useful alternative If the bicycle is to merit praise, the ridiculous posture affected by professional male riders and their imitators must be discountenanced and denounced by wheelmen's periodicals, forbidden by wheelmen's clubs and discouraged by reputable makers and dealers Girls under the age of puberty should be restricted by parents, guardians and teachers to short rides, and no woman of any age be mounted on any other than a wide elastic seat without anterior horn or central ridge Lastly, the gate of the bicyclist should be such as can be maintained with the least personal exertion The paper was briefly discussed by Dr Carter and Dr Mosher of Ann Arbor, Mich

This was followed by a paper "On the Part that Public Instruction Should Have in the Way of Precaution Against Contagious Diseases, by Dr Carlos Santa Maria of Durango, Mexico, "On Public Bathing Establishments, with a Description of the New Public Bath in Brookline, Mass," by Dr H Lincoln Chase, "On Public Baths" (illustrated by stereopticon), by Dr W H Tolman of the city of New York

(To be continued)

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It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL as we have been notified by the postmasters of the larger cities that second class mail matter not having street address, would be placed in the general delivery *to await call*

SATURDAY, OCTOBER 10, 1896

THE AMERICAN PUBLIC HEALTH ASSOCIATION

The mere enumeration of the reports of special committees and individual papers read at the recent meeting of the American Public Health Association at Buffalo, N Y (September 15-18), is sufficient evidence of the amount of scientific sanitary inquiry accomplished Four addresses, sixteen reports of committees and fifty-three papers—seventy-three in all—constitute a formidable list, and when to these are added the discussions on these reports and papers, which are arranged in groups according to subjects, these discussions being a characteristic of this body, which it encourages and on which it justly prides itself, its reputation as a working body can not be questioned The Association was actually in session eight hours on the first day, eight on the second, nine on the third and five on the fourth, a total of thirty, the general business occupying scarcely an hour each day Giving thirty minutes to each report and limiting voluntary papers to twenty, of which only five were read by title, and restricting discussions to five minutes, it will be seen how well the time was filled, a result accomplished only by the admirable business methods of this excellent body The unflagging interest of the old members was shown by the fact that nine of the thirteen surviving ex-presidents were in attendance and very actively engaged on duty as members of the Executive Committee Prof STEPHEN SMITH of New York City, the founder of the Association and its first President (1872, '73 and '74) in his address in acknowledgement of his enthusiastic welcome at Buffalo declared he was especially gratified at discovering that the Association still adhered to its early practice of doing its administrative business through an executive committee, thus taking the disputations and hysteric jangling, by which so much time is wasted in many large associations, off the floor and permitting the legitimate work for which the Association was organized to be performed Every resolution offered is read and upon being seconded referred without debate to the Executive Committee, by which it is carefully considered, amended, if thought best in substance or language, and referred back the following day to be put upon its passage, or quietly tabled in committee The confidence in the conclusions of the committee is such that debate seldom occurs and dissent rarely The composition of the committee justifies this confidence The five officers, six elected members, of whom three are renewed annually, and the ex-presidents secure a judiciary of old and experienced members Occasionally some disappointed proposer of a resolution, on finding his hobby not reported, jumps up with an amendment to the constitution changing the composition of the committee usually by leaving out the ex-presidents, but a year of sober reflection before the retaliating amendment can be considered, has heretofore saved the Association the loss of what may be considered its balance wheel The participation of the former presidents preserves a constant policy and preserves it from local influences, log-rolling and hasty, injudicious legislation

The duty of the Executive Committee is no sinecure It assembles early on the day preceding the annual meeting and is in session the greater part of that day and subsequently daily from 8 or 9 to 10 A M, and usually at night after the adjournment of the evening general session, often when matters of importance have been referred to it continuing its work until two or three o'clock in the morning The Executive Committee investigates every application for membership and determines whether to recommend the applicant for election As stated, it considers every resolution introduced into the Association, amending it as it may believe proper, or changing its phraseology It examines all papers and prepares the daily programs, and generally discharges all the working duties of the Association An Advisory Council, consisting of one member from each State, Territory, the District of Columbia, the Army and Navy of the United States the Marine-Hospital Service, the Dominion of Canada and each of the Provinces, and each State, Territory and the Federal District of the Republic of Mexico, besides acting as a nominating committee of officers and selecting the place of meeting for the ensuing year, also considers important questions of policy and makes such recommendations to the Association as shall best secure its objects Through this council, which is virtually a senate of over [illegible] members, the equal representation of all the constituent nationalities and States is obtained, and its recommendations in matters of vital importance have always been sustained At the meeting just ended however, its selection of the place of meeting for 1897 was reversed for reasons that had not been presented to it

The Executive Committee, the Advisory Council and the Publication Committee (the last consisting of the Secretary and and two members residing conveniently near him), are the three standing committees, and practically do all the general business, and the splendid uniform series of volumes of its transactions for the twenty-four years of its existence are speaking testimony of the value of its sanitary work, constituting a hygienic library containing information which FLORENCE NIGHTINGALE declared could not be found anywhere in Europe To the Chairman of the Publication Committee, the Secretary of the Association, Dr IRVING A WATSON of Concord, N H, Secretary of the State Board of Health of New Hampshire, now in his fifteenth year of office, is due the invariably neat and appropriate announcements, circulars, etc, which are characteristic of this body Indeed, Dr WATSON's suggestion of a desire to resign the Secretaryship (which is a triennial office), on account of the proportions its duties have assumed, alarmed the members at the prospect of losing an officer so exceptionally qualified, faithful and efficient

The American Public Health Association is characteristically *American* In 1884 it extended its membership to Canada and in 1890 to Mexico, the membership of both these countries embracing their most distinguished sanitarians and health officers, who have been as regular in attendance, as interested in the work, and as enthusiastic and able contributors as those from the United States Two annual meetings have been held in Canada, in 1886 and 1894, and that of 1892 in Mexico, and both Ottawa and Toronto contended for the meeting in 1897

An especially commendable feature of this Association is that it is in no sense a junketing body It goes where it hopes to do good and devotes itself to that end It asks no courtesies and is prepared to assume all the expenses of its meetings Nevertheless, civilities have been everywhere generously showered upon it and accepted conditional upon their non-interference with its legitimate work At Buffalo the Local Committee arranged its excursions after the formal adjournment, only requesting that one night might be assigned for a reception at the Ellicott Club, but an interesting paper induced the members to meet before the reception and hold a session of a couple of hours before presenting themselves at their hosts'

The system of special committees, covering almost the whole ground of public hygiene, secures a concert of inquiry At Buffalo, sixteen of the seventeen special committees (now numbering twenty) actually presented reports, and an examination of the authorship of these reports and of the individual contributions, shows that all but five or six of the seventy-three writers hold or have held responsible representative positions as members of State and Provincial Boards of Health and of the Superior (National) Board of Health of Mexico, as health officers of cities, and as *Government officials* of the United States Army and Navy and the Department of Agriculture, thus directing their several lines of inquiry in common channels Dr STEPHEN SMITH claims for the Association the credit of having developed the system of State and Provincial Boards of Health into its proportions Originally the subject of a special committee, whose work grew so large that a whole session was devoted to it exclusively, becoming later a Conference of State Boards of Health, meeting at first coincidently with the Association and later independently, the new organization has never lost interest in the parent body, as shown by the numbers of presidents, secretaries and members of State and Provincial Boards of Health who participated in both the business and sanitary work of the late meeting as chairmen and reporters of special committees, authors of papers and disputants in the discussions Perhaps the crowning glory of the American Public Health Association has been the establishment of a fraternal union of the United States, Canada and Mexico in one body, in which international distinctions are abolished, and the sanitary officials of the three countries harmonized in the interests of a common humanity in a mutual policy of protection against epidemic *importations*

A SLANDER ON THE MEDICAL PROFESSION

In a medico-legal congress a year or two ago it was asserted that it was the practice of reputable physicians to deliberately shorten life in cases of painful and incurable disease A large portion of the public undoubtedly accepted this statement as gospel truth and possibly thought it nothing extraordinary The superstition that the orthodox treatment of human rabies is of this character is held by many of the ignorant in the community, and even grosser errors of the same general nature may be occasionally met with among them

The lawyer who made the statement referred to, defended and advocated the practice and his utterance was, without question, based on no knowledge but was offered as a part or support of the argument he was making before the congress It is a pity his ideas of the ethics of another learned profession should have been so hazy, and also that he was not more scrupulous as to his facts His ideas were noticed to some extent by the medical and secular press at the time, the public had at least a chance to be enlightened and it is probable that, on the whole, the utterances did little harm

The notion, however, that incurable diseases should be cut short by an expeditious euthanasia is every little while advanced by some one-sided humanitarian. The latest comes from California, where a misguided clergyman offers an elaborate proposition of a law for the doing away with the victims of incurable disease. It provides that "a commission of eight persons of high character and unassailable reputation be appointed by the governor of the State, four to be physicians, and the others to be the district attorney, the chairman of the health board, and two public spirited citizens of pronounced humane tendencies. The sufferer should appeal to the commission with the consent of his family, then the case should be thoroughly investigated by the commission, and if the physicians are satisfied that every known remedy has been tried, and the case is absolutely incurable and the patient has suffered intolerable pain, and the relatives can show that they act from none but humane motives, and all these points have been settled to the satisfaction of the commission, it should be empowered gently and humanely to put an end to the misery of the affected person."

The above in its elaborate legal ordering of homicide is very reminiscent of an imaginative work of fiction by an English writer of note that appeared some ten or fifteen years back, and, like it, might be taken as a satire on certain extreme social and economic tendencies. The author of the present proposal, however, is accepted as in earnest, and is probably only one of a large number who in their ill-regulated philanthropy throw well known moral and social principles to the winds. It is easy to see to what consequences his line of reasoning would lead, if the idea of the sacredness of human life were abolished, as would be necessarily the case with the adoption of any such plan.

The medical profession owes to itself and to the public a duty in this matter. It is not that it is misunderstood and misrepresented, there are many respectable and even estimable people who are more or less demoralized by the publication of such propositions, and public sentiment, which ought to be on the highest plane, is degraded to a very material extent by them. Society needs all the safeguards it possesses and the belief in the absolute inviolability of human life is one of the most important of these. There is no need, of course, to say that regular physicians should not encourage any belief in popular impressions derived from such publications, but there may be a very positive utility in their actively denouncing them. At all events they should endeavor to correct any popular belief that our profession sanctions even the suggestion of the violation of human or moral laws. It ought to be unnecessary to say that this should be done, but if we grow familiar with such charges and consequently neglect or ignore them, we have no assurance that such neglect will not appear to the uninformed as a tacit acknowledgment of their truth. When clergymen make such propositions as the one here reported what wonder that a credulous public should think it possible that doctors might be ready to endorse them or carry them out. The commandment "Thou shall not kill," would seem to be binding even upon the clergy. The public knows little and misunderstands a great deal in regard to the ethics of our profession and it is not amiss therefore to occasionally correct a possible misapprehension that they are not in all respects strictly in accord with the highest ethical standards. There is little danger, judging from our past, that we will protest too much.

THE MANIA FOR PROPER NAMES.

Several of our foreign exchanges are protesting against the practice of rendering the study of anatomy more difficult by encumbering the text books with the names of parts of the body which neither describe nor locate them, but merely commemorate the name of some obscure anatomist. The boast of the student now is that he can quote more proper names than the rest, but they are of no benefit to him in locating the parts designated by them. How much better to call it the anterior sacro-dural ligament than Trolard's ligament, for instance? It is a longer name but it means something, and enables the student to place it at once.

In surgery the abuse passes all proper limit. It is not only perplexing to enumerate the various operations, but in many cases a name has been hastily applied to an operation not devised by the person named. It is simply an impossible thing for the average surgeon to mention *seriatim* the various incisions that have had proper names tacked on to them, and then the question of priority is generally impossible to settle by any amount of research. One of our recent dictionaries has devoted much space to the definition of operations catalogued under proper names, and as for instruments, many of them have two or three claimants. The familiar example of a cranial saw first figured in the "Chyrurgeons Storehouse" of SCULTETUS, coming to us for a long time under the name of HEY's saw, and by many still called by that name, affords ample evidence if any more were needed, of the loose practice in this matter.

In medicine there has been a singular passion for naming diseases for some favorite, or somebody who is presumed to have been the first to give a description of the disease. In some cases we have conflicting claims of priority, but the number grows with too great rapidity, and in these days of almost total neglect of the history of medicine, serious and absurd errors are perpetuated. Now let us keep close nature in our nomenclature, and have it as nearly descriptive of the thing itself as possible Then we approach the true scientific ideal

CORRESPONDENCE

Medical Education

MONTCLAIR, N J , Sept 26, 1896

To the Editor —The two editorials upon medical education in the last issue of the JOURNAL are exceedingly well considered and show a decided disposition to go to the root of things What is particularly pleasing in your remarks is the strong demand for *thoroughness* in our medical schools, and the intimation that until better methods of teaching are adopted the mere lengthening of the curriculum will avail little The medical schools seem disposed to indulge in much self congratulation because a number of them have extended the period of study required for a degree of doctor of medicine to four years, and most of them now seem to require more or less preliminary education In the latter direction it hardly seems possible that they can go too far But the rigid requirement of four years study of medicine is perhaps not so wise a measure At all events it has always seemed to me that the object to be gained in going to a medical school is a knowledge of medicine sufficient to enable a man to enter upon the practice of it, and some men will easily acquire in three years what it will take others four to accomplish No two minds are precisely alike in childhood and as individuals approach maturity these mental differences increase rather than diminish so that it may prove a hardship and an injustice to a man with an unusually brilliant and acquisitive mind to be forced to spend the same amount of time in studying for his degree as the more slow going individual Your editorial speaks of bedside examinations of students In like manner the candidate should be examined in the deadhouse as to his knowledge of gross pathology, should operate upon the cadaver (if living subjects are not available), should bandage the manikin, etc He should compound prescriptions, and be required to detect and demonstrate incompatables and poisons and should give the antidotes to the latter, in short he should be put through an examination which would really reveal what he knows

No written examination, no oral examination, no bedside examination, nor even the certificate of good moral character, alone is a sufficient test of a man's capacity to enter into practice But a judicious combination of them all is, I submit, necessary and should be adopted in each case Let the examinations last from three to six days The examining board should sit constantly or nearly so and the candidate should be allowed to appear before it whenever he chooses Let a fee sufficient to pay the board's expenses, say from $50 to $100, be charged each candidate If he only desires to take part of the examinations, there seems to be no reason why he should not do so, paying only the fees of those examiners before whom he chooses to appear

One student might qualify himself to pass all these examinations in two or three years Another, who would perhaps make a sober and more reliable practitioner, would require four or five years And—and this is the most satisfying part of the plan—a dullard, a superficial or lazy student, or one whose preliminary education had been quite defective could never pass at all What a glorious day it would be for American medicine if such a plan could only be realized ! How such a body of trained examiners would sift out the weak and badly prepared candidates ! No amount of cramming would enable a weak or illy prepared man to pass a competent and trained examiner, who could take the applicant to the bedside, to the operating room, to the laboratory and to the dead house, who would require one or more carefully written papers upon his particular subject, and any number of answers both oral and written that he might think proper

Such an examination as the one outlined used to be required and I presume still is by the Army Examining Board When this board had finished five or six days' examination of a candidate, both the board and the candidate felt that the latter had told all he knew It was the only fair and satisfactory medical examination which I ever passed My examinations for my degree were trivial, almost foolish, and my examinations for the hospital were too short and were *greatly a matter of luck*

It has been asserted over and over again that an examination does not show what a man knows, and this allegation is measurably true of such examinations as I have last spoken of, depending for their result as they do upon so many fortuitous circumstances, as, *e g* , the readiness and assurance of the candidate in case of oral examinations, and his capacity for cramming in case of written examinations But an examination that takes plenty of time and which attacks the candidate's fund of knowledge in various ways as, for instance, setting the ready and superficial man to write answers which require thought, accuracy and careful study, and on the other hand, asking the slow, methodical man, whose written answers may be good, such questions orally as to reveal whether his work has covered sufficient ground, or taking the bookish man to the bedside or the laboratory and letting him show whether he can put his theories into practice, etc

If the medical schools, the AMERICAN MEDICAL ASSOCIATION, the New York Academy of Medicine and every representative body of physicians and the profession at large will unite in insisting upon competent boards of examiners in medicine (whether they be State or National) we may sometime get such bodies of examiners and such examinations that the degree of doctor of medicine shall of itself confer distinguished honor Our medical schools and our physicians would in that case no longer be looked down upon by our foreign confrères The greatest good for the greatest number would be attained because the average physician would be a man of sound education and broadened views This state of affairs would perhaps be rather near the millenium, but it is really not entirely beyond the range of possibility Very respectfully yours,

RICHARD C NEWTON, M D

Expert Medical Testimony

PHILADELPHIA, Sept 28, 1896

To the Editor —There have been many papers and articles written on the subject of expert testimony but none I think so clearly express what is needed in courts as that published in our JOURNAL of Sept 26, by L Harrison Mettler of Chicago, under the title of "Insanity in Court "

The Doctor's arguments are so convincing that criticism is well nigh disarmed His demand for a separate medical trial to precede the civil where a plea of insanity is offered, carries great weight and would seem to be perfectly fair

The commission, suggested by him, to be composed of learned and experienced experts appointed by the supreme court or in other constitutional way beyond the reach of politics is certainly to be desired

It is only too true that "the present system does not carry out the abstract spirit of the law that every man shall be tried by his peers, but on the other hand works injustice in many cases of real insanity and favors the exercise on the part of criminals of feigned insanity " Such being the case, is it not time that the great AMERICAN MEDICAL ASSOCIATION should assert itself and formulate and pass resolutions in accordance with the progressive ideas on the subject of expert testimony

Yours very truly, T RIDGWAY BARKER, M D

PUBLIC HEALTH

Smallpox at Marseilles.—Since 1872 there have only been eight years when the deaths from smallpox at Marseilles have been less than a hundred, and in 1886 they were over 2,000. There have already been 358 deaths in the first quarter of 1896, and the lax preventive measures render the city a menace to the rest of Europe. The disease is practically endemic in the Italian colonies there, which contain about 100,000 souls, with thirty or forty families crowded into buildings that would scarcely accommodate ten properly.

Oil in Urinals.—It has been found that if urinals are coated with heavy oil, the urine leaves no traces nor odor as it runs off. The 178 public urinals of Vienna are treated in this way, with satisfactory results, saving the city $30 a year for the water supply of each. Many other European cities have already adopted the use of oil for this purpose. The urinal is scrubbed with a broom and plenty of water once a week or fortnight. When it is quite dry it is painted with thick mineral oil, obtained by distilling petroleum. Another system has a permanent syphon supply of oil.—*Journal d'Hygiène*, September 30.

Successful Retrovaccination.—The New York Health Board, after a long series of experiments, has solved the problem of retrovaccination, the vaccination of calves with matter taken from vesicles on children. Early attempts in this direction gave imperfect results on account of the choice of improper kinds and methods of collection from the children. A report submitted by John H. Huddleston, Medical Inspector, shows that complete success has now been attained in the manufacture of vaccine virus. In all fifty calves have been inoculated with the virus taken from children. In forty-seven of these the results of the clinical test of the virus thus produced are known. The test consists in vaccinating three places on each of five previously vaccinated children. With the virus obtained from the animals there have been vaccinated 123 children, with a total result of 367 vesicles obtained out of 369 possible. In over 300 cases vaccinated and inspected this month at the department, 95 per cent. were successful, and the 5 per cent. of failures were all revaccinations.

The Distribution of Sterilized Milk in New York and Brooklyn.—Statistics obtained at the health department show the good effects of the free distribution of sterilized milk in Brooklyn under the auspices of the Board of Health, a charitable work that was made possible through the philanthropy of Mr. Nathan Strauss. The death rate during the second week of the recent hot weather among children under five years of age was only 34.4 of the total number of deaths, which is quite a remarkable showing when it is considered that the general death rate was exceptionally high owing to the excessive heat. It is necessary to go back to the beginning of June to find a week when the death rate among children was as low as that. During the period when the heat was most intense Mr. Strauss sent over to Brooklyn about 1,500 bottles of sterilized milk a day. A large force of men was employed at the New York depots, getting the milk ready for distribution, and it was transported to Brooklyn at the expense of and with the wagons and horses of the donor.—*Boston Medical and Surgical Journal.*

Treasury Regulations Regarding Immigrants.—The *Boston Medical and Surgical Journal* states that the Treasury Department has issued an order designed to prevent the spreading of contagious disease by immigrants in other places than the port of entry. It provides that after arrival at a quarantine station of a vessel upon which there appears, or has appeared during the last voyage, a case of cholera, smallpox, typhus fever or plague, and after quarantine measures provided by regulations of the Treasury Department have been enforced and the vessel given free pratique, it is ordered that notification of the above mentioned facts be transmitted by the quarantine officer to the commissioner of immigration at the port of arrival, whose duty it shall be to transmit by mail or telegraph to the State health authorities of the several States to which immigrants from said vessel are destined, the date of departure, route, number of immigrants and the point of destination in the respective States of the immigrants from said vessel, together with the statement that said immigrants are from a vessel which has been subject to quarantine by reason of infectious disease, naming the disease. This information is furnished to State health officers for the purpose of enabling them to maintain such surveillance over the arriving immigrants as they may deem necessary.

Toxicity of Alcohols.—Austria, Switzerland and Belgium are about to, or have already, established two grams per litre as the maximum of impurities allowed in alcohols, and the latter country forbids certain substances absolutely. Professor Riche in a vigorous address before the Acad. de Med. protests against the impression produced upon the public by this and similar legislation, that it is only the adulterations that render alcohol injurious. The people should be educated that the alcohol itself, brandies, etc., are distinctly toxic, and he asserts that there should not be any government authority, tacit or official, for its use as a beverage. He adds his testimony that the spread of alcoholism in recent years is appalling, and describes the customs prevalent in Normandy, where the laboring classes, young and old, all take their coffee two or three times a day, and always with cognac. The mothers even take a bottle of this "coffee" to their little children in the crèches. At one small town the amount of pure alcohol consumed per capita is more than nineteen litres a year.—*Bulletin*, September 8.

The Abolition of British Quarantine.—The *Lancet* says that under a "Public Health Act of 1896" we have this year, will be done away with the last vestige of quarantine in the United Kingdom. The principal section of the Act is the first one, in which power is granted to the local government board to make regulations, just as they have already done for the purposes of cholera, as to the hoisting of signals by vessels having any case of infectious disease on board, as to the questions to be answered by masters, pilots and others, as to the detention of vessels and persons infected, and as to the duties of certain individuals under the regulations. The term "epidemic, endemic, or infectious disease" naturally includes yellow fever and plague, the only two diseases as to which quarantine was carried out, and since all the quarantine acts mentioned in a schedule are repealed, the only method of dealing with these two quarantinable diseases will in the future be that which has now been adopted for many years as regards cholera. In Scotland and in Ireland the local government boards of those portions of the kingdom acquire similar powers, and it may be assumed that the regulations made in the three portions of the United Kingdom will be alike in all essential respects. The Act comes into operation on November 7 of this year, and by that time new regulations will doubtless have been issued to give effect to its provisions.

Dangers of Handling Skins.—At the request of the French authorities Prof. Riche has been investigating the trade in skins to determine the dangers of handling them. He found arsenic in skins from China, Chicago, Buenos Ayres, Australia and Mexico, but he does not consider the danger from arsenic so serious as the possibility of infection from the anthrax microbes. He therefore recommends the following precaution which apply to both and have been promptly enforced in Paris, where over two million goat skins alone are handled annually in the tawing works and nearly a million in the morocco factories, the majority received from China. The [illegible] ld be opened in the open air, or at least in an open shed, the ground kept wet with plenty of water or some antiseptic The workmen *should* put on special garments closed at the neck and wrists, or at least a long buttoned blouse, with rubber gloves The face, hands, arms and neck should be washed with an antiseptic immediately afterward, and the locality carefully swept and irrigated The bales should never be carried in the arms or on the back, but always on carts or barrows, and they should be stacked in the store rooms in low piles The rooms should have openings on all sides and if there is no communication with the sewers, the refuse water should be collected in tight cisterns He also called attention to the great danger of poisoning from the orpin used in tanning, which is a mixture of sulphid of arsenic and arsenious acid This is applied with a mop, but the skins are then folded and carried by hand to the pile, which is a frequent cause of ulcerations He suggests the substitution of sulphid of sodium, which produces the same effect and would put an end to the dangerous manufacture of orpin —*Journal d'Hygiène*, September 17

On the Prevention of Ophthalmia Neonatorum —We have before us two pamphlets by Dr Wm George Sym of Edinburgh bearing upon the conditions that obtain in Scotland regarding blindness from ophthalmia neonatorum The more recent of the papers is an address read before the Medico Chirurgical Society of that city, in March, 1896 In it he has briefly sketched the various modes of treatment and prophylaxis, and emphasized the importance of cleansing the face of the child from any contamination acquired during its passage through the vagina before any lotion was applied or any bathing carried out Statistics of blindness in the latest census returns showed that there were more than five thousand alive in England and Scotland who were blind from this entirely preventable disease On comparing the statistics of blindness for England with those for Scotland it was found that in the former there were 809 blind persons per 1,000,000, in whom 1 in every 6 was "blind from birth," while in Scotland there were only 695 per 1,000,000 of the population, and of these only 1 in 7 7 was "blind from birth " Children who became blind during early infancy were classed in the census papers as "blind from birth " This marked *difference in favor* of Scotland the author attributed, in part at all events, to the very much larger proportion of births in England attended by midwives and not by regular practitioners He urged the necessity of taking the greatest care to see that all women educated as midwives or midwifery nurses should be thoroughly instructed in this matter In the event of the Midwives Bill passing and being extended to Scotland this would come to be of paramount importance Dr Sym gave an account of the legislation in force in certain countries with the view of stamping out the disease In Austria, Switzerland, eleven States of the American Union, and other countries midwives were liable to more or less severe punishment for failure to report cases that occurred in their "practice " The Ophthalmological Society's (1885) scheme for giving out to each person registering a birth a slip bearing a warning as to the danger of the disease fell through, but in Glasgow and certain other towns this had been done at the expense of the corporation, and Dr Sym urged a similar proceeding in Edinburgh Contrasting medical practice twenty or thirty years ago with that of to day, the number of cases of ophthalmia in infants was vastly less at the present time, and the cases as a rule were not so virulent

The Infectious Disease Hospitals of Berlin —The *Sanitary Journal*, June, has a special report on the fever hospitals of Europe The institutions at Berlin are reported as having the modern improvements and a talented staff

"Berlin affords some of the best examples of isolation hospitals in Northern Europe There the study of infectious disease is carried on with the patient assiduity and thoroughness characteristic of German modern science In the Koch Institute, established by the famous professor whose name it bears, all kinds of febrile disease are studied in a series of highly equipped laboratories by graduates and students, under the superintendence of highly qualified experts, presided over by the Professor himself In the adjoining grounds, close by the Charité Hospital, there is an experimental hospital laid out by Dr Koch upon his own principles, in which are treated all kinds of infectious disease, including tuberculosis and lupus Here it may be observed that all over the continent I found Dr Koch recognised as the leading medical modern exponent of the treatment of infectious disease and of bacteriologic science His pupils are already among the most prominent teachers in many continental medical schools, and some of their discoveries—notably that of Loffler in diphtheria—have produced highly beneficial results The principal hospitals in Berlin for the treatment of febrile diseases are the Moabit, capable of accommodating 900 patients, constructed upon the plan of single floored pavilions and for the most part of wood, the Friedrichshain Hospital, built in 1874, affording accommodation for general as well as fever patients and built in two, and in one or two cases, three floored pavilions, the Urban Hospital, opened in 1890, with accommodation for 600 patients of all classes, showing the most that can be made of limited space where ground is dear within a large city, and also built in two or three floored pavilions, and lastly, the Emperor and Empress Frederick Fever Hospital for Children, recently erected by the Berlin municipality, where the results of the most modern scientific research have been adopted in the general plan of the hospital, which is laid out in single floored pavilions "

PRACTICAL NOTES

For Infantile Eczema —*Dust* with the following powder Pulv zinc oxid gms 15, pulv amyli 32, pulv camphor 2 For itching, paint on the skin Tr camphor, tr benzoin co āā c c 32 —Dr C E Lockwood, in *Med News* September 26

New Treatment of Warts —Laubenburg has discovered that if a spot is touched with acidum nitr fum and then immediately afterward with acidum carbol pur liquef there is strong chemic action, the effects of which penetrate deep into the tissues and completely and permanently cure warts, condyloma, angioma, etc —*Cbl f Chir* , August 8

Permanganate of Iron in Eczema —The *Monitor Médico*, August 1, quotes from an exchange that both dry and serous eczema are successfully cured by moistening them two or three times a day with a 1 to 2 per cent solution of permanganate of iron applied on a cotton wad It is also recommended for other skin affections accompanied by pruritus

New Needle Lancet for Secondary Cataract —Stilling of Strasburg, has been using very successfully in his practice the last year and a half, a needle lancet shaped like the half of an arrow, its two cutting edges doing away with the necessity of using the cataract knife It is illustrated and described in detail in the *Revue Gen d'Ophthalmologie*, August 31

The Siesta and Digestion —Some *recent experiments are* reported in the *Gaz degli Osp e delle Clin* , of September 1, which demonstrate that a nap after eating weakens the muscular action of the stomach and increases the secretion of acid Repose in a horizontal position, without sleeping, increases the muscular action without increasing the secretion of acid The conclusions are therefore that it is advisable to lie down after a meal, but not to fall asleep, especially in case of dilatation of the stomach or hyperacidity

Multiple Vesical Puncture —Centra describes a case of retention of urine with serious symptoms due to asymmetric hypertrophied prostate He withdrew the urine by vesical puncture and in four days the congestion and hypertrophy of the prostate were reduced to such an extent that the patient could urinate normally The interesting feature of the case was the number of punctures necessary to effect a cure, three each day

They were made at different points along a horizontal line commencing 1 cm above the upper edge of the symphysis pubis, and produced no inconveniences —*Gaz degli Osp e delle Clin* , August 30

Gangrenous Hernias—Bogdanik suggests that better results will be obtained in gangrenous hernias if the pus and surrounding tissues are cleansed and disinfected before the peritoneum is touched He describes a case thus treated in the *Cbl f Chir* , August 15, proving the advantages of rendering the field of operation a clean wound before proceeding to the operation proper He adds that the scissors, knife and a few clamp forceps are all that is needed if the suture of the intestine is made exact

Celluloid Soles for Flat Foot—Kirsch recommends the use of celluloid instead of metal, for insoles in the prothesis of flat foot, as they require no skill in making and are exceptionally cheap, light and easy to walk on A sheet of celluloid 1 5 to 4 mm thick according to the weight of the patient, is placed on a cast of the foot and kept in place by a handkerchief, held by the twisted ends as a handle The whole is then dipped into boiling water for a minute or a half, which softens the celluloid The ends of the handkerchief are then twisted tighter, and the celluloid molded to the cast as it hardens It can be softened again as often as may be necessary The edges are smoothed level, cut into the proper shape and sand papered, and the under side made rough to prevent slipping in the shoe If the celluloid is painted with soluble glass it becomes almost fireproof, which is an important improvement for the celluloid bandages described in the JOURNAL, August 22, page 437, but is scarcely necessary for an insole —*Cbl f Chir* , August 29

Treatment of Sunstroke—Desanti's article in the *Gaz degli Osp e delle Clin* of August 30, commences with Do not let it happen In enlisting soldiers, for instance, it is much better to reject those who are liable to have sunstroke, men with weak hearts, anemia, or any chronic trouble, and alcoholics, in short, all those who have inherited or acquired a tendency to morbid conditions When sunstroke occurs, after removing the patient to the shade and loosening his upper clothing, the action of the heart must be stimulated and kept up with energetic friction and slapping, and the inhalation of a few whiffs of ether or acetic acid, water applied to the head, etc , and as he recovers, some stimulant given him to drink If the patient is exhausted from overwork, debility or malarial conditions, an intravenous injection of quinin should be made, or at least a hypodermic injection (4 grams each of hydrochlorate of quinin and antipyrin, in 6 grams of acq dist heated together If the solution crystallizes in the bottle it can be dissolved by slightly heating it again) He recommends that this solution should be kept on hand at times when it is liable to be needed Certainty as to malarial condition is only acquired by examining the blood, but as this would be impossible, and as quinin is comparatively innocuous, it is best to treat in this way all doubtful cases In severer cases with asphyxia, traumatic shock or intoxication from infection, it is of the utmost importance to excite the cardiac contractions, and the loss of a minute may cost a life Rotter advises an energetic revulsion on the cardiac region with a moxa, Mayor's hammer or blazing sealing wax, cauterizing or scarifying a large extent of surface and scattering salt upon it Direct excitation of the cardiac contractions with the electric current has been found effectual, but an electric appliance of sufficient power to send a current through the chest is not always at hand The best and most practical means to accomplish it is artificial respiration This can be Sylvester's method of raising the arms, or Pancini's raising the shoulders, or Laborde's rhythmic traction of the tongue, any way to introduce oxygen into the lungs and drive the blood into the heart There is no stimulant for the membranes of the heart that compares with the oxygen of the air, and Desanti has seen persons revive after they have given no indications of life for several hours As a supplement to the above treatment, he mentions the hypodermic injection of sulphuric ether, which has a powerful effect in stimulating cardiac action The surgeons of the German army are required to carry a Pravaz syringe on the march with a bottle of ether for this purpose, which practice, he adds, should be introduced into every army

NECROLOGY

SIR JOHN ERIC ERICHSEN, one of the foremost representatives of British surgery, died September 23 The distinguished surgeon was born in 1818, of noble Danish descent He was surgeon extraordinary to the Queen, ex president of the Royal College of Surgeons of England, and president of University College of London His contributions to scientific medical literature were extensive and important, especially the well known "Science and Art of Surgery" His "Concussion of the Spine" and the monograph "Railway Injuries of the Nervous System" showed his energy in another surgical division

N RUEDINGER, M D , of Munich, "the last of the old school of anatomists" His works on anatomy, descriptive, topographic and systematic, form an important part of the foundation of our present knowledge His folio atlases are in nearly every library, and the list of his contributions to science includes works on anthropology, embryology, histology of the organs of hearing, etc It is to him we owe the use of carbolic injections for cadavers He was one of the founders of the *Monatsschrift f Ohrenheilkunde*, and of a special magazine devoted to the anthropology and early history of Bavaria

G LAGNEAU, M D , Paris, noted for his profound anthropologic and hygienic studies which resulted in many practical measures of the highest benefit to his countrymen and to humanity He was member of the Academie de Medecine for twenty years

JULES ROCHARD, M D , Paris, aged 76, retired Inspector General of the Service de Santé de la Marine, President of the Académie de Medecine in 1894, of the French Association for the Advancement of the Sciences, and of various other scientific societies, a brilliant and classic writer and orator, "whose entire life was an honor and an example to the medical profession" His numerous works on hygiene, education, epidemics, etc , were rounded off by his vast work recently completed, the Encyclopedia of Hygiene Among his contributions to the *Revue des Deux Mondes* were articles on "Marine Hospitals," "The Rôle of Alcoholism in Modern Society," "Hygienic Education and Mental Overwork," etc He was one of the few who seem to have everything to complete their happiness, international honors, devoted friends and family, and perfect health until 1883, when he was shot by an insane person He apparently recovered from the wound, but the bullet remained in his breast, and recently produced the troubles which led to his death He commenced his career as a third class surgeon in the navy, and retained his love of the sea as a true Breton to the last His son Eugène is editor in chief of the *Union Medicale*

CHARLES MILNE, M D (University of the City of New York, Medical Department, 1873), at New York city, September 28, aged 56 He was a member of the Medico Legal Society of New York —Henry Hooper Mitchell, M D (Department of Medicine of the University of Pennsylvania, Philadelphia, 1812), at Elkton, Md , September 27, aged 76 years ——William C Caldwell, M D (University of Wooster, Medical Department Cleveland, Ohio, 1869), at Fremont, Ohio, of cancer of the stomach, September 29, aged 59 years He was a member of the Ohio State Medical Society and a contributor to various medical journals

MISCELLANY

City Physician of Bath, Maine —Eben J Marston, M D, has been appointed to this position, *vice* W H Tukey, M D, resigned

The Detroit Academy and Medical Association upon their first meeting, Monday, September 7, had pathologic specimens which were furnished by Drs H O Walker, Carstens and Longyear

To Drill Holes in Glass —The *Bulletin d'Apiculture*, No 119, states that holes can be easily drilled in glass with an ordinary trocar or drill, if the spot is first moistened with a drop of the following mixture Dissolve 25 parts oxalic acid in 12 parts of essence of turpentine, and add a chopped clove of garlic Set it aside for a week, stirring occasionally Pour it into a bottle and keep tightly corked

Training School for Insane Asylum Nurses —In response to demands of outside physicians a training school for nurses and attendants of the Cook County (Ill) asylum for the insane has been organized and a competent faculty, principally of medical men connected with the asylum, selected The course of studies includes physiology, hygiene, therapeutics, massage and allied subjects

The Pathological Society of Rochester, N Y, has petitioned the city council for an ordinance to allow the Mayor authority to grant permits for physicians to ride on the sidewalks with their wheel between 10 o'clock P M and 6 o'clock A M The Rochester *Herald* has a strong editorial recommending the council to pass the ordinance requested

Illness of Dr Hamilton —The editor of the Journal has been confined to his room, most of the time to his bed, with an attack of acute bronchitis since September 25 He was present at the Macewen dinner in compliment to that distinguished surgeon and the host, Professor Senn, but was ill then and scarcely able to speak, since that time he has not been out of his room His friends hope that he may be out in a few days He was relieved from the Marine Hospital last week

Retires From the Armenian Field —Dr Grace M Kimball, who is appointed assistant physician for Vassar, obtained a reputation for her bravery and work in Van in behalf of the Armenians Few laborers in that difficult field have remained so long and continuously without an interval of rest Worn out by the prolonged anxiety and the arduous duties of her medical and missionary work, Dr Kimball has decided to retire from the Armenian field, and after visiting the hospitals and schools in Europe, she will begin her college work in January

Cause of Electric Death —Experiments have been made by A M Bleile upon dogs in order to determine the cause of death in electric shock The conclusion reached is that for a given animal in a normal condition as to health a definite amount of electric energy will produce fatal results It is thought that the action of the electric discharge is to contract the arteries and increase the pressure of the blood, and that death is due to inability on the part of the heart to sustain the increased pressure of the blood so produced Postmortem examinations seem to show that the passage of the current does not cause any anatomic disintegration —*Popular Science*, September

Entertainment to Professor Macewen —Prof Nicholas Senn, president of the American Medical Association, gave a dinner at the Chicago Athletic Club, September 28, in honor of Prof William Macewen, of Glasgow, Scotland There were present Drs W T Belfield, John E Owens, Truman W Miller, Edmund Andrews, Christian Fenger, A H Ferguson, Captain Pilcher, U S A, Major Hartsuff, U S A, J H Etheridge, E J Doering, D A K Steele, Dr Cole, of Montana, E J Senn, G Wm Reynolds John B Hamilton, Jas A Lydston Speeches were made by most, if not all, of those present, eulogizing the honored guest, from which it can be inferred that the entertainment lasted into the "wee short hours ayant the twal," and was of a character well calculated to delight the genial Bobby Burns himself, had he been present at the affair The editor of this Journal regretted that illness compelled his early withdrawal

A Sleep producing Exercise Preferable to Hypnotics —Dr J B Learned, Florence, Mass, writes to the *Boston Medical and Surgical Journal* that he has experienced "infinite advantage" from moderate and varied muscular exercise as a means of inviting sleep On retiring put in use, by contraction, a certain group of muscles, change to another before exhaustion to another and thence to another, having a definite routine, and continue until a sense of fatigue has come The brain meantime is asked to keep a record of the respirations and of the muscular engagements in their order until it, too, says "Enough!" A few minutes generally suffices Will sufferers be willing to use any methods or agents foreign to the materia medica? Sleep immediately on retiring is restorative The drug does not make it so, continuously used Wine, tobacco, tea, coffee and late suppers, with social and emotional excitement often delay the hour of sleep My own personal needs were at the foundation of this "discourse" Conditions of the heart, digestion and nervous system should not be ignored in any case of insomnia The sufferers are abundant everywhere now

University College of Medicine, Richmond, Va —At a meeting of the faculty of this college Dr F S Harker, who has so efficiently filled the position of adjunct to the professor of histology, pathology, bacteriology and urinology, was unanimously elected to fill the chair made vacant by the recent death of Dr Charles H Chalkley Beside the special training which Dr Harker has received which fits him for the new chair, he has shown himself gifted as a teacher —*Va Med Semi Mo*, September

Phosphorus Necrosis —Mr Edwin Gould, who owns a large match factory at Passaic, N J, has recently promulgated an order that all employes who do not present, within a specified time, a dentist's certificate that their teeth are in a condition of perfect repair shall be discharged The danger of necrosis of the jaw from the phosphorus used in the manufacture of matches is well known, and he is said to have been induced to take this step by the fact that not long since an employe of one of the Diamond Match factories in Ohio, who had been attacked with necrosis, sued the corporation for $10,000 damages —*Boston Med and Surg Jour*, September 24

Anent Germs —Dr K N Bahadhurji of Bombay, in the *Indian Lancet*, July 1, 1896, concludes an exceedingly interesting critique upon "The Germ Fad," as so styled by himself, in the following presentation "Bacteriologic therapeutics is but a system of modern alchemy, and rests and proceeds on incorrect assumptions and daring guesses as conveniently abandoned as confidently set up Fortunately the germ scare is cooling down and germs will soon cease to be the objects of such anxious care and study, and will in time be consigned, in all probability, to the limbo of exploded myths which have had their day" The article is a long one and might advantageously be condensed for the pages of the Journal but what has been already quoted sufficiently displays its decided skepticism regarding the rôle of the bacillus, the wherefore of its being, the significance of its appearance, the explanation of its functions and the embarrassing schemes for its annihilation For the present, at least, we must conclude that there is no uncommon law in the governmental system of the microorganism, and may we not add no unique personalities, with extraordinary powers As has been said, we may multiply corroborations but add only a moiety to our real knowledge

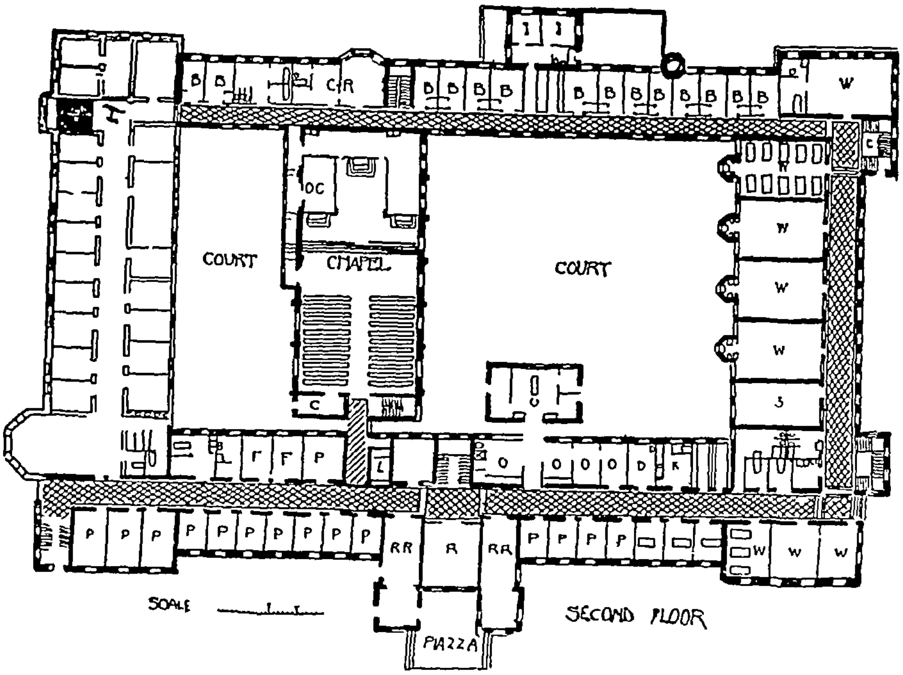
Calcified Fibroid from Cremated Corpse.—Dr. Yamagiwa of Tokio, in *Virchow's Archiv*, Vol. cxliv, part 1, 1896, describes a specimen of calcified fibroid found after cremation in the ashes of a woman in whom myoma of the uterus had been diagnosed during life. She died of paraplegia at the age of 70. When 28 she noticed for the first time a tumor in the hypogastrium, next year she married but never bore a child. The tumor grew slowly till she was 38, then it ceased to increase and became very hard. At 45 the patient lost her husband. When 50 she complained that the growth had become very heavy. In 1882 a doctor examined her, and noted that the tumor was of stony hardness and freely movable. Paralytic symptoms appeared and lasted for about three years, they reappeared seven months before death. Debility and emaciation then followed. Yamagiwa does not distinctly make out that the paraplegia was due to pressure of the tumor on nerves. The fibroid removed from the ashes looked like a petrified human brain. It weighed six pounds and ten ounces and measured from before backward nearly eight inches, transversely over five and one half inches, and vertically a little less than five and one half inches. On histologic examination uterine fibers were discovered. The mass was due to pure calcification and there was no ossification.

The Medicine Man of the Congo.—Among the Bakete, a tribe of the upper Congo river, the witch doctor rules supreme. The following is quoted from a recent lecture by a returned missionary. "The only attempt at religious rites is that practiced by the medicine man. In each town there are a certain number of medicine men, or witch doctors, but the medicine men of the town have no right to make medicine for their own town. Once in five years strong medicine is made. The doctors gather outside the town and hold a palaver as to the price to charge for making medicine, and after long haggling agree on a sum. They then enter the town and command that houses or open sheds be built for their accommodation and announce their intention of making medicine. The people are instructed that on the next day they must not leave their houses until noon, and the injunction is implicitly obeyed. Early in the morning the medicine men go into the woods and surrounding a tree that they know to be a medicine tree, speak to it thus 'O tree, we want medicine from you. We want good strong medicine. After having partaken of this medicine anyone who shall steal, commit murder, lie or do any wrong let him die.' The last word is repeated three times. The medicine men take the bark from the tree, grind it into powder and mixing with palm oil make it into balls the size of a chestnut. Returning to town they enter the huts prepared for them, summon the people and administer the medicine, repeating the words addressed to the tree regarding the penalty for wrong doing after having taken medicine. The natives thoroughly believe in the power of the medicine men."

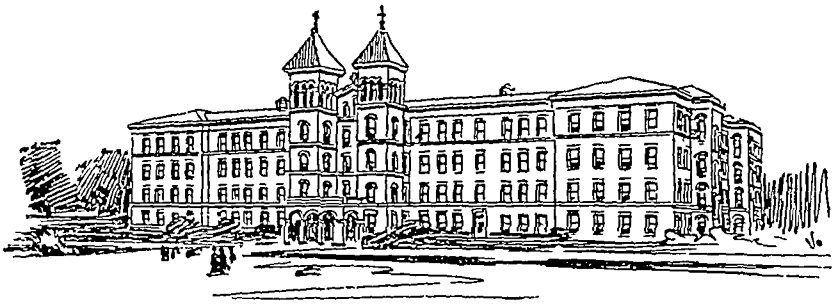
Regulation of Practice of Veterinary Medicine in Virginia.—A law has been passed in Virginia, taking effect May 1, 1896, which permits only two classes of persons to practice veterinary medicine or surgery in that State. 1, all persons who were, prior to that date, practicing veterinary medicine or surgery in that State, provided that before Nov. 1, 1896, they shall apply in writing to the State board of veterinary examiners and furnish satisfactory proof that they have been in practice in the State prior to May 1, 1896; 2, all persons who shall hereafter receive certificates from such board, and shall in all other respects comply with the law. Any person shall be regarded as practicing medicine or surgery within the meaning of this act who shall profess publicly to be a veterinary surgeon and offer for practice as such or who shall prescribe for sick domestic animals needing medical or surgical aid, and shall charge and receive therefor money or other compensation, directly or indirectly. But nothing in this act shall apply to residents of Virginia who confine their practice to the castration and spaying of live stock, nor shall it prevent any person from prescribing for live stock who does not claim to be a veterinarian or veterinary surgeon. The board of veterinary examiners mentioned is to consist of five members, learned in veterinary medicine and surgery, to be appointed by the governor, from a list of names recommended by the Virginia State Veterinary Medical Association. The board may prescribe rules, regulations and by laws for its own proceedings and government, and for the examination by its members of candidates for the practice of veterinary medicine and surgery. In case any applicant shall fail to pass a satisfactory examination he shall not be permitted to stand any further examination within the next six months thereafter or until the next meeting of the board, nor shall he have again to pay the prescribed $5 fee; provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of disease; and provided, further, that when, in the opinion of the president of the board, any applicant has been prevented by good cause from appearing before the board, the president of the board shall appoint a committee of three members who shall examine such applicant, and who may, if they see fit, grant him a certificate. Any person who shall practice veterinary medicine or surgery in violation of this act, shall be fined not less than $50 nor more than $500 for each offense, and it shall not be lawful for him to recover by action, suit, motion or warrant any compensation for services which may be claimed to have been rendered by him as such practitioner of veterinary medicine or surgery.

The Life Insurance Examiner's Decalogue.—The medical Department of the Prudential Insurance Company of America has issued the following ten commandments to their examiners. 1. Carefully read the medical examiner's instruction book. 2. Examine promptly in a quiet place, preferably at the home of the applicant, and allow no one to be present during your examination. 3. Answer each question and each subdivision of a question. Be explicit in your answers. Avoid indefinite expressions, such as childbirth, shock, grief, accident, injury, change of life, don't know, etc. Use ink in writing. 4. Pay especial attention to the average quantity of spirits, wines and malt liquors used daily. Give an average of each. If there is a history of previous excess give full particulars. 5. Give a full description of any illness in the history of an applicant, number of attacks, when last, duration and severity. 6. Describe the duties of the applicant. Explain trade terms used to denote an occupation. State the line of business or work. Note if occupation is hazardous or injurious to health, and see that the true occupation is stated. 7. Give careful attention to the moral hazard of the risk. 8. Be sure the urine you examine was voided by the applicant. 9. Be sure you examine the right person, and that you get the exact age, date of birth and a full family history. 10. Personally examine and personally secure and witness the signature of the applicant.

Substantial Professional Advance in Therapeutics.—The editor of the *American Therapist*, September, refuses to admit the gloomy views of those who look upon therapeutics as a thing of the past. While it may be true that too many practitioners rely on the empiric use of ready made pharmaceutics, and thus forget or never learn the rudiments of pharmacology and therapeutics, yet the proportion of scientifically and broadly educated physicians is increasing very rapidly in this country. The scientific study of therapeutics has never engaged more or better men than now. The proceedings of representative medical societies and current issues of legitimate and leading medical journals include a very satisfactory *proportion of contributions on therapeutic subjects.* These are the sources from which this journal draws much of the practical and instructive matter presented monthly to its readers—besides inspiring and printing many original contributions. One of our exchanges recently printed a pleasantly satiric letter from a correspondent who informed the editor that in this period of specialism, and finding most specialties "done to death," he had decided to adopt the *specialty of general practice*. That is the peg on which our contemporary should hang his "pessimism." Therapeutics is neglected by the average aspirant for publicity because it seemingly affords no special prominence; it is too general. Any 'ology, properly wooed, brings *reputation and distinction*. The broadly educated general practitioner, without a specialty, is too commonplace for average ambition. But the study of therapeutics is nevertheless indispensable—even in all specialties. Progress in therapeutics is constant, and we may hope with undoubting optimism that the fashion to study and write on drugs and drug action will spread through all ranks.



GROUND PLAN OF THE ALEXIAN BROTHERS HOSPITAL



THE NEW HOSPITAL BUILDING

The Alexian Brothers New Hospital in Chicago.—With imposing ceremonies the corner stone of the new hospital of the Alexian Brothers was laid Sunday, October 4. About 25,000 people were present to witness the laying of the stone by the most Reverend Archbishop Patrick Feehan. There was also a great parade by various Catholic societies, in which about 15,000 persons took part. The gay uniforms and ecclesiastic regalia gave an altogether old-world appearance to the pageant. The *Inter Ocean* says:

"Along the route the procession was greeted with much enthusiasm, most of the streets being lined with spectators. A number of houses were decorated with flags and bunting. When the first division reached the new building it marched on to St. Joshaphat's School, while the rest of the marchers broke ranks and joined the gathering crowds waiting for the laying of the stone. In anticipation of the ceremony a raised platform was built in front of the main entrance to the building. This platform was decorated with the national colors in flags and bunting. Over the platform was placed a canopy. In front of this waved the papal colors, surrounded by the national flag and those of a number of European nations. The platform was carpeted, and chairs were reserved for the invited guests behind the speakers' platform. At the west end of the platform was the stone, which was ready to take its permanent place in the structure after the ceremony. At 4 o'clock the platform was filled with guests and members of the Alexian Brotherhood, waiting for the arrival of the Archbishop and the procession. One of the earlier arrivals was Mayor Swift." We are indebted to the *Inter Ocean* for the accompanying illustrations.

Antitoxin Collective Investigation (Second) American Pediatric Society.—*To the Profession.*—The American Pediatric Society are encouraged to ask the co-operation of the profession in a further collective investigation. Laryngeal diphtheria is believed to furnish a crucial test for antitoxin; the present aim is to ascertain, 1, what percentage of cases of laryngeal diphtheria recover without operation, under antitoxin treatment; 2, what percentage of operated cases recover. The Society asks for records of cases of *diphtheria involving the larynx, whether operated or not, occurring in private practice in the United States and Canada, treated with antitoxin.* It is expected that cases occurring this year will be treated with reliable preparations of the serum, will be treated early, and will be given efficient doses The second report is designed to be a study of cases occurring between the closing of the first report, May 1, 1896, and the closing of the present collective investigation, April 1, 1897 In order to secure data which shall make the tables complete, circulars containing blanks for ten cases have been printed and are now ready for distribution It is desired that physicians shall fill out circulars (blanks) as cases occur, not trusting to memory, and shall urge their friends having similar cases to do the same Circulars can be had by applying to the committee (address below) Several groups of cases in the first investigation arrived too late and were lost to the report It is desired that circulars as soon as filled (ten cases) be returned to the committee The collection of cases must close at the end of March, 1897 For extra circulars (blanks), for returning circulars (filled), and for further information, address the chairman of the committee W P Northrup, M D , 57 East 79th Street, New York, N Y

THE ACTION OF THE SOCIETY UPON THE (FIRST) REPORT

1 Dosage For a child over 2 years old, the dosage of antitoxin should be in all laryngeal cases with stenosis, and in all other severe cases, 1,500 to 2,000 units for the first injection, to be repeated in from eighteen to twenty four hours if there is no improvement, a third dose after a similar interval if necessary For severe cases in children under 2 years, and for mild cases over that age, the initial dose should be 1,000 units, to be repeated as above if necessary, a second dose is not usually required The dosage should always be estimated in antitoxin units and not of the amount of serum 2 Quality of antitoxin The most concentrated strength of an absolutely reliable preparation 3 Time of administration Antitoxin should be administered as early as possible on a clinic diagnosis, not waiting for a bacteriologic culture However late the first observation is made, an injection should be given unless the progress of the case is favorable and satisfactory

Phosphorus Workers in Relation to Life Insurance —The *Medical Examiner* regards the manufacture of matches as an occupation that debars its workers from insurance examination

Around about Frutligan, in the Bernese Oberland district of Switzerland, a large proportion of the inhabitants are idiotic, due to the phosphorus used in matches In every house matches are manufactured, and in every house is a misshapen, grinning idiot This condition of things is due to an accumulation of hereditary influence, as the parents and grandparents for generations have been engaged in this industry The Swiss, as well as scientific and philanthropic people generally, deplore this state of things, and are endeavoring to devise means by which matches may be manufactured without sulphur or phosphorus Chemists are endeavoring to discover some substance for this purpose

The same thing occurs in France where matches are made In France matches are manufactured by the goverment The compensation is very small—something like one sou a hundred Matches are made of imported wood The government endeavored to substitute native wood, but the people objected, because with native wood they were not able to turn out as many matches, and consequently could not make as high wages, which amounted to about from two to two and a half francs a day They wanted to be paid by the day instead of by the piece As a compromise the old soft wood was allowed them on the condition that they should work by the piece

Another source of discontent was the danger attending the manufacturing of matches It is so detrimental to health that they wished government to grant those who do this work a pension, which was denied While yet young—say at 25—the operator will lose his teeth, they frequently become paralyzed and idiotic as before mentioned, and in nearly every instance there is experienced some form of ill health We remember while a student at Bellevue that the late Prof James R Wood used to hold up before his class a specimen of the lower jaw which he had taken from a patient who had introduced phosphorus into it by picking a decayed tooth with matches The consequence was a necrosed jaw The Professor used this instance not only to illustrate the danger of the above practice, but to show that bone would grow again if the periosteum was preserved In this case the jaw had been reproduced So far as insurance is concerned, those who make matches or work in phosphorus are not acceptable risks They should not be examined if their occupation is known to be of this character

Pan American Medical Congress —(*Telegram to the Journal*)—Cincinnati, Ohio, Oct 6, 1896 *To the Editor* —The official train for the Pan American Congress, Mexico City, leaves Chicago and Cincinnati November 10, A M , and St Louis, P M , same date, with sleeping and dining cars on special schedule for entire trip H L E JOHNSON, M D

Detroit

At the meeting of the Detroit Academy of Medicine, September 22, Dr David Inglis presented a report of "Three Postmortems "

The first case was a man 64 years of age, who had a history of previous injury Four days before the doctor saw him he had severe headache, but no vomiting There was some incoordination in using the legs and he found it difficult to climb stairs He yawned frequently These symptoms were progressive at the time he presented himself He had consulted a specialist who reported no affection of his ears, although there was a history of an attack of inflammation of the middle ear, ending in suppuration and accompanied by much tenderness over the mastoid cells

The doctor's diagnosis was impending apoplexy, but opposed to this was the fact, that there was no arcus senilis, arterial rigidity, or increased arterial tension The pulse was soft, 72 Motor symptoms were bilateral

Transverse myelitis was then suggested, in favor of which was the limitation of the motor defect to the lower extremities Systemic sepsis was excluded, there being no albumin found in the urine There was no evidence of poison from gout or malaria The old abscess of the middle ear was considered The motor defect in the legs increased, the headaches gave place to mental dullness and stupor, which ended in coma

The postmortem revealed no lesion of the brain substance The right half was compressed so that there was a space of half an inch between it and the skull which was filled with fluid The ventricles were empty, and there had been a large amount of subdural sero sanguineous effusion

Dr Inglis said "The postmortem is instructive in the following particulars First, it establishes clearly that congestion of the brain is a reality Authors, of late, have been inclined to ridicule the belief in congestion of the brain 'Gray,' in particular, discredits and resorts to the unscientific method of showing that no single one of the symptoms of cerebral congestions is pathognomonic, and that the prominent symptoms are frequently met with, individually, in various conditions "

The diagnosis of impending apoplexy was correct and based on the signs of severe cerebral congestion The case was first a serous effusion, not a hemorrhage, as first there was compression of the brain, and second, the blood formed a soft and thin layer everywhere over the cortex, and not a clot is found from a spreading hemorrhage, nor was it over both halves of the cerebrum

The doctor brought out the fact that a diffused lesion sometimes causes very limited local manifestations In this case although the entire cortex was involved sensation was perfect and the motor defect was confined to the lower extremity Had the case been minus stupor and headache the diagnosis would have been some lesion low down in the spinal cord In uremic poisoning the same principle applies, the poison pervading all parts of the brain, yet a part only may be selected for its paralyzing effect

Another point in the case is that the coma disappeared and the patient regained c [illegible] before de [illegible] h shows that unconsciousness does not always depend upon limited pressure, but upon increasing pressure, and with decreasing pressure consciousness may return while the pathologic conditions remain

The doctor called his next postmortem a riddle A boy aged 14, with a history of traumatism of head and back, developed choreic movements, which were bilateral He was dull, abstracted and answered questions slowly The choreic movements were such that it was impossible to listen to the heart sounds properly, heart's action was rapid and tumultuous, speech quite unintelligible

Six weeks after he was brought to Harper Hospital, where he was again examined He recognized Dr Inglis, but could not speak His left arm was powerless, but could use the fingers slightly, and raised the forearm like a flail The right arm trembled on voluntary motion Appetite ravenous Paralysis of left arm occurred some days before death Drs Emerson and Hitchcock thought the case was one of multiple sclerosis Dr Inglis a cerebellar tumor

A postmortem showed no nodules of any kind, but a large quantity of serum in the brain The liver was the seat of innumerable uniform, thickly disseminated nodules of some neoplasm The mesentery contained small nodules, but the glands of this organ were normal

This case was presented to illustrate the fact that it is sometimes as well to confess ignorance as to know many things that are not so The heart was normal and an operation over an arm center would have shown sound brain tissue

The third case was a man aged 25 While blowing water from a hose he felt a sharp pain in the back of his head This occurred in October, 1895 About the end of that year patient complained of pains over occiput, down the neck and across the shoulders No history of head injury The attending physician diagnosed rheumatism and treated him for a couple of weeks Then eye trouble manifested itself, and he was sent to Dr L E Maire, who diagnosed optic neuritis There gradually developed furious paroxysms of head pains, with vomiting, and sometimes bilateral convulsions and absolute loss of sight

When Dr Ingils first saw him, the pains were of such a nature that the patient would cry out Patellar reflex was entirely lost, ataxia marked, and when attempting to walk he tangled his feet and fell or leaned to his right Was slow in responding to questions, answering in a loud voice Was fretful and ate inordinately Diagnosis, cerebellar tumor, and in consultation an exploratory operation was advised He was trephined over the right lobe of the cerebellum, but no tumor could be found The postmortem in the temporal region revealed minute elevations of thin plates of bone covering points where it was almost perforated Twenty or thirty of these were found and were not confined merely to the region of the pacchionian bodies, though most numerous at the median line of the temporal bone The dura mater was found altered in structure and the pacchionian bodies enlarged The skull was found thinned at many places, especially at the parietal eminences, where, over an area as large as a silver dollar, on each side, the bone was as thin as card paper and could be easily broken with the fingers

Upon removing the brain a pint or more of sero sanguineous fluid escaped, which evidently came from the ventricles Upon incising into the brain substance, the trouble was found to be located in the cerebellum, both lobes degenerate, the left slightly more than the right It could only be called a degeneration, the substance being broken down into a semi fluid, resembling pus, though having no purulent odor The tentorium cerebelli was absorbed at the immediate site, and adjacent portions of the cerebrum seemed slightly affected There were found in parts of the ventricles, small adherent masses which appeared like granulation tissue

The diagnosis was confirmed to the extent that there was a cerebellar lesion, but not tumor of both halves

In closing his paper Dr Inglis said the postmortem was instructive in showing the remarkable thinness of the skull Had the patient received a blow upon the parietal eminence, it might easily have broken in the thin plate of bone Dr Inglis also said that the medico legal aspect of such a condition deserved notice

Dr J Flintermann read a paper entitled "Senile Dementia"

The Superintendents of the Poor for Wayne County (Detroit) have difficulty in finding room for the poor of the county in their new "county house," and for the insane at the asylum In the county house there are 807 inmates and in the county asylum 368 Dr E O Bennett, since being installed medical superintendent, May, 1881, has wrought many improvements The asylum farm of 160 acres is taken care of almost entirely by the insane

The buildings include the "county house," asylum hospital with chaplain's office attached, Wayne County Asylum, the new asylum erected in 1894, and double residence for the medical superintendent and book-keeper, the gas lighting and heating plant, electric light plant and outbuildings

For the last three years no acute febrile diseases have occurred in the asylum or county house, with exception of three cases of typhoid that developed in the latter

THE PUBLIC SERVICES

Army Changes *Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Sept 26 to Oct 2 1896*

Captain Norton Strong, Assistant Surgeon relieved from duty at Fort Sheridan, Illinois, and ordered to Chicago, Ill , for duty as attending surgeon and examiner of recruits in that city First Lieutenant John S Kulp Assistant Surgeon is relieved from duty at Fort Walla Walla Washington and ordered to Vancouver Barracks, Washington Captain William Stephenson Assistant Surgeon is relieved from duty at Vancouver Barracks Wash , and ordered to Fort Sheridan, Ill

First Lieutenant Powell C Fauntleroy, Assistant Surgeon is relieved from duty at Fort Grant Arizona and ordered to Fort Niobrara Nebraska, for duty Captain George McCreery, Assistant Surgeon, is relieved from duty at Fort Niobrara, Nebraska and ordered to Boston Mass , for duty as attending surgeon and examiner of recruits

Captain William B Davis Assistant Surgeon, granted leave of absence for twenty five days

Change of Address

Bennett Alice, from Norristown, Pa , to Wrentham, Mass

Grote, H W from New Orleans La , to Room 20, Oakland Music Hall, Chicago Ill

Harding George W from Twelve Mile to North Manchester Ind

Krousgrill D from Wadesville to 605 S 4th St Terre Haute Ind

Kilbride M Frank, from Spring Lake Beach, N J , to 2212 Green St , Philadelphia, Pa

Lebensohn, M H from 63d and Morgan Sts , to 692 Sangamon St Chicago, Ill

Motter Murray Galt from Head of 30th St N W , to 1017 14th St , N W , Washington D C

Russell, E S , from Tuscarawas, Ohio, to Room 421 Bissell Block, Pittsburg Pa

Sutton E M , from Masonic Temple to 328 329 Woolner Building, Peoria Ill

Von Koerber Paul E , from Loup City, Neb , to Casa de Correos City of Mexico, Mexico

Wright, John from Clinton Ill to 297 Reed St San Jose Cal

LETTERS RECEIVED

Bernd Henry & Co St Louis, Mo Bell Clark, New York N Y Bache Emmet New York N Y Brophy Truman W Chicago Ill Bates Whitman Co , The New York N Y Bartholow, P Philadelphia Pa Bausch & Lomb Optical Co , Rochester N Y , Boardman, E O , Overton, Neb

Charteon M R Montreal Can Chadwick Co The, Chadwicks, N Y Cutler, H G Chicago, Ill Caldwell W S , Freeport Ill

Dibrell Jr J A , Little Rock Ark Douglas, Richard Nashville, Tenn Dower, T J , Livermore Iowa

Fisher John, Chicago, Ill Ferguson & Goodnow Chicago, Ill , Foote, A E Philadelphia Pa Ferguson E D , Troy N Y

Gibbs, M D , Hartford, Mo Hummel A L , Advertising Agency (2) New York N Y Haldenstein, J New York N Y , Hoadley, A E Chicago, Ill Hall Jr , J Underwood San Jose Cal Halleck, W E , Washington D C Hall Cromwell Cromwell Conn Hagler, E E , Springfield Ill Hammond, Wm A , Washington, D C Higgins F W Cortland, N Y

Johnson, F M , Boston Mass Jelks, Jas T Hot Springs, Ark

Kellogg, E B , Boston Mass Kellogg W H , Palo Alto, Cal , Kress & Owen Co , New York N Y

Lee, Frederick D , Milwaukee, Wis Learned J B Florence, Mass Little C H , Saginaw, Mich Luckey, J E Chicago Ill Londonderry Lithia Spring Water Co , Nashua N H Lea Bros & Co , Philadelphia, Pa

Merrick, M B (2) Passaic N J Manley, Thos H New York, N Y Mills H R Port Huron Mich

O Toole T J Eagle Grove Iowa

Pope Mfg Co Hartford Conn Pressey , A J Grand Rapids Mich Penton A B Mackinaw City Neb Parke, Davis & Co , Detroit Mich

Rumbald, F M St Louis Mo Reynolds, Arthur R Chicago, Ill

Stirling A W , Atlanta Ga Sternberg Geo M , Washington, D C

Warfield, Clarence Galveston, Tex

The Journal of the
American Medical Association

Vol XXVII CHICAGO, ILL, OCTOBER 17, 1896 No 16

ORIGINAL ARTICLES

DIAGNOSIS IN DISEASES OF INFANTS AND CHILDREN

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY C G SLAGLE, M D
MINNEAPOLIS, MINN

Candor compels me to admit that upon more extensive investigation than I have hitherto made, I found that much more had been done and said, and better done and said upon this subject than I was previously aware of, but found the subject matter widely scattered throughout voluminous medical literature

Inasmuch as we are compelled to study and practice every department of medicine before we can become at all skillful in pediatrics, it would be most unsatisfactory to attempt to discuss diagnosis in this special department without first reviewing the subject of diagnosis in general, as it applies more or less to all ages and conditions of life For we must and do endeavor to instruct our students, that pediatrics can never become "a specialty," as that term can only and properly be applied to the *study* and *treatment* of diseases of special organs or parts of the body, while pediatrics deals with the entire system, though only with "little men and women" And as the true "specialist' will be successful in his "specialty" just in proportion as he has mastered all departments of medicine, so the pediatrist will be proficient in his "limited practice" precisely to the extent that he has learned all other branches of our art

Some one has well said that the pediatrist must be a good all-round physician and something more, and we are here to-day to discuss that *something more* in our line, I shall only attempt to consider it more especially from the standpoint of the college instructor, and in its relation to our students and young practitioners The proper discussion of this subject would seem to suggest inquiries something like these 1 What is the import and scope of diagnosis? Wherein its intricacies, and what relation does it sustain to other branches of medicine? 2 What special features does it possess in its relations to diseases of early life? 3 What is the present status of this department of our art as compared with the past? 4 Can it be in any way rendered more accessible and comprehensible to our students and young practitioners? 5 Is there a demand for a treatise on the "Diagnosis of the Diseases of Infancy and Childhood, general and special, medical and surgical?

I can not presume to be able to answer all of them satisfactorily, except in a general way, but have endeavored to present in as concise form as seemed possible some suggestions along this line of thought for further elaboration in the discussion which it may elicit from you

If I may be pardoned for an attempt at definition of my subject, "Diagnosis,' before this learned body of medical men, it would be "the faculty of recognizing diseases so as to locate and name them with facility by the correct interpretation of their pathologic and clinical symptoms, and thus to be able to differentiate each one from all others"

Of the many difficult problems in medicine which confront our students on leaving our college halls to enter upon the general practice of medicine, diagnosis is the most difficult and puzzling So it probably was with most of us, and so it doubtless will be to them for years to come, despite our best efforts to assist and prepare them for it

We will not wonder that proficiency in the art of diagnosing is difficult to attain when we fully appreciate the fact that it is the practical application of all we really know of medicine It is the apex of the grand pyramid of medical science and art, whose base has been founded upon the enduring principles of anatomy, physiology and pathology It is, therefore, the real practical test of every physician's medical education and skill, and just in proportion as he possesses faculties and facilities for correct observation and analytic reasoning will he become proficient in correctly interpreting the various phases and symptoms of disease, and we all appreciate the fact that it demands even more skill and native tact to rightly interpret the various peculiar phases of morbid action in infants and young children, where we are deprived of the aid of speech, and who are often unapproachable, than it does in adults where we can better secure from themselves the history of the case, the location of the pain and the important subjective symptoms which they are experiencing

Diagnosis to the skilled physician is much like an intricate case at law being tried before a competent judge, who renders his decision only after all the conflicting evidence "is in' and carefully weighed and sifted And as anatomy, physiology and pathology are the "A B C" of medicine, so etiology and symptomatology (illuminated by ample clinical and laboratory investigations) are the "cathode rays' which illuminate the deeper hidden mysteries of disease and render them accessible to our comprehension

Dr Dorning has well said that "The only enduring foundation for the superstructure of diagnostic proficiency is in systematic and exhaustive study at the bedside combined with *diligent and conscientious* research in the laboratory'

It is a lamentable fact that many men in our profession never make good diagnosticians even after enjoying ample opportunities And it has been demonstrated to me many times during my long professional life that many otherwise fairly good practitioners have betrayed th [illegible] defective in diagnostic [illegible] faculty

There seems to be with some men something like "a natural tact" in this matter, which only a comparatively few possess in any eminent degree But if all can not be Da Costas in this faculty, we probably have a right to expect that our students can and ought to be taught to recognize at least typical forms of disease as they meet them on entering general practice

The faculty of correct and systematic examination of the patient seems difficult for many men to learn They seem to proceed in a rambling and desultory manner, as if they had no specific aim, to accomplish either by questions asked or in their estimation of the value of essential symptoms And this, too, notwithstanding our best endeavors to teach them system, and emphasizing the fact that they are often required to ascertain what the disease is *not*, in order to determine what it *is* "Diagnosis by *exclusion*, *negation* or *elimination*" so exceptionally well illustrated by Da Costa

After a thorough familiarity with all the departments of medicine, and an ability for systematic examination of the patient, our diagnosis will be predicated for the most part 1, upon the "physical signs" as they appeal to our trained special senses, 2, the symptoms as they indicate deviation of function, 3 the history of the case as we elicit it from the patient or friends

Diagnosis being a science and art, which teaches us to distinguish one disease from another by tracing symptoms to the causes from which they originate, must be valuable not only for purposes of *treatment*, but enables us also to form a correct opinion as to the *result* of the disease (*i e*, prognosis), for without correct *diagnosis* there can be no correct *prognosis* nor treatment

We have all seen physicians, with more ingenuity than skill, excuse their inability to render an exact diagnosis by assuring the interested parties that an exact diagnosis is no longer demanded in most cases, as we do not now treat the *name* of a disease, but have learned to search out the *indications* of treatment and meet them *pro re nata* with our therapeutic agents All of which might sound satisfactory to the unskilled, but would hardly satisfy a diagnostician, for he will understand that, as a rule with few exceptions, we can only learn the "indications of treatment" by recognizing the disease, that we must know what the disease is, its true nature and location before we can expect to remedy it

Doubtless many young physicians fail at first in diagnosis from the fact that they have not yet sufficiently acquainted themselves with normal conditions and processes of the human system, notwithstanding we are emphasizing the facts before our students as much as seems possible that they *must* become well acquainted with *normal* appearances before they can appreciate the *departures* or deviations, that they must know what symptoms mean in individual cases before they can combat them successfully, and often in order to illustrate and emphasize our teaching, remind them of the impossibility of treating successfully such symtomatic conditions as we meet in eclampsia, dropsy, jaundice, dyspepsia, constipation, headache or even *pain*, fever and many like morbid phenomena, which we all know are only external exponents of various internal processes, without *knowing* the *nature* of the proximate *cause*

All that has thus far been said and all that can be said of the intricacies and learning and skill requisite to meet the complexities of diagnosis in general, obtains in accentuated form in the diagnosis of the diseases of infant and children, for we soon recognize the fact that exact and even early diagnosis in the various ailments of young children is more important often than it would be in adults, partly, it may be, on account of the demand for early prophylactic measures being enforced, if it should prove to be an infectious disease to which young children are peculiarly liable as also from the well-known fact that many acute ailments run a more rapid and violent course in early life So intricate, indeed, is this matter that few of us, perhaps, will ever become so gray, experienced and skillful that we may not sometimes make mistakes in diagnosis I yet remember when Professor Yandell of the University of Louisville, Kentucky, apologized to the class for his inability to render a diagnosis in a case which proved upon postmortem to have been gangrene of lungs, by assuring us that he had followed the great Louis through the wards of the hospitals of Paris and saw him write over some of the beds for several days together, "No diagnosis "

Many ailments of young children simulate each other in clinic features so closely that it is impossible for a while to render a positive differential diagnosis Not long since I saw an attack of what proved to be typhoid fever in a child diagnosed for several days as "meningitis," without much suspicion of its incorrectness, on account of the peculiar cerebral and neurotic symptoms present, and this, too, by several of our most skillful and experienced physicians

Who of us have not, at some time, been perplexed for a while in rendering a differential diagnosis between such similar appearing affections as "non-specific pseudo-membranous laryngitis" and true "diphtheritic laryngitis," or between convulsions (centric or eccentric) and epilepsy, or between pertussis in its first stages and catarrhal bronchitis in young children?

Professor Jacobi has truly said 'that there is scarcely a tissue or organ which behaves exactly alike in the different periods of life," and the same distinguished author reminds us (Cyclopedia of Diseases of Children) that pneumonia, tuberculosis, typhoid fever, rheumatism, epilepsy, diabetes and many other affections of the young differ considerably from the same affections in the adult in their clinic symptoms, and even sometimes in their anatomic aspect But of all the manifold ailments of early life perhaps none are more generally difficult to diagnose correctly and promptly than the various protean, nervous and cutaneous affections, to determine whether they are simple or complex, idiopathic, symptomatic or sympathetic whether organic or merely local or functional in their nature

One of the most unsatisfactory features of diagnosis in young children has often been the impossibility of eliciting or of correctly interpreting the "physical signs" in affections of the heart, lungs, pleura, etc, this partly from the deviations of the sound elicited upon percussion and auscultation, and partly it is often from our inability to approach or control the child in a satisfactory manner I doubt, indeed, whether physical sounds in the chest afford us the assistance in diagnosis in young children that they do in adults We are constantly reminded also that not only do diseases more frequently hybridize in early life, but also that many of the causes, symptoms and even diseases themselves are peculiar to that period of existence

It is a recognized fact that diagnosis can sometimes be either confirmed or corrected by noting the peculiar behavior of our therapeutic agents in special cases, notably, opiates, antipyretics, digitalis, belladonna, etc , more especially liable to be manifested in cerebral, cardiac and certain pulmonary affections, typhoid fever and other diseases in the young All of these peculiarities and perplexities in the diagnosis of children's affections are being emphasized and elucidated in many ways by those who are authority in these matters, and the advances in pediatrics and helps in methods of diagnosis within a few decades have been most gratifying, especially to some of us older members of the profession When I entered the medical profession in 1859, pediatrics was in its infancy in this country I know of but one text-book at that time exclusively upon "Diseases of Children," by an American author, and that was by D F Condie of Philadelphia, and almost without tables and illustrations, which constitute such an admirable feature of all our recent text-books on pediatrics, which are now numbered by the dozens

At that time pediatrics had little recognition in any of our schools I remember, however, that a great impetus in the evolution of this department was inaugurated very soon thereafter (about 1860) principally through the efforts of Professor Jacobi of New York, who, as you all know, has by his talent, energy, zeal and enterprise contributed as much as any other man in America toward the advancement and present elevation of pediatrics in this country He it was, who, nearly forty years ago, took the initiative in placing this important department of medicine upon the high plane which it justly merited in medical science While his laudable endeavors have been nobly seconded and supplemented by a host of younger co-workers of equal talent, energy and zeal, and hence the names of Jacobi, Condie, Smith, Meigs, Keating, Pepper, Holt, Starr, Rotch, Chapin, Northrup, O'Dwyer, Koplik, Osler, Gibney, Love, Edwards and a host of others too numerous to mention here, but of equal ability, have become known and honored throughout the world of medicine, more especially by their efficient labors in this department And it is pleasing to know that among these distinguished names are the authors of our most popular text-books on pediatrics Truly, "by their fruits we shall know them" America has done well, may their good work go on

It is very satisfactory to find that they have done about all that seems possible to be accomplished in text-books to facilitate diagnosis for instructors, students and young practitioners by so thoroughly illustrating the phases of disease in early life by introducing numerous colored plates, photographs, tables of contrasted symptoms in similar diseases, temperature and other charts, analytic tables of blood, foods, urine, etc , together with details of clinic cases, etc , all of which prove very helpful to both teacher and student, and are in pleasing contrast to our text-books of only a few years ago

As to the exact assistance which the new science of bacteriology and the late advance in photography are yet destined to aid us in this field, can hardly be fully estimated, but the possibilities seem very great, and what they have already accomplished seems wonderful, for from the well recognized intimate connection existing between pathology, etiology symptomatology and diagnosis, whatever contributes essentially to the better understanding of the causes, nature and symptoms of disease must afford greater facilities in rendering exact diagnosis, and it is thus the fever thermometer, camera and microscope have served as our most valuable agents as "instruments of precision" in this matter Nor can we ignore what applied chemistry has achieved along this line in the investigation of foods, the blood of infants, ptomains, leucomains, urinary analysis, etc , all of which are fully demonstrated in our late text-books

Since I began the preparation of this paper at least two new works on general diagnosis have been announced as "in press" One on "Clinic Diagnosis, by Charles E Simon of Johns Hopkins Hospital, being "Diagnosis by Microscopic and Clinic Methods," says the author, and the other, "Herrick s Handbook of Diagnosis, ' by James B Herrick of Rush Medical College As to how far they will meet the demands in this especial department will soon be apparent Prof J L Smith s publishers have also announced a new and carefully revised edition of his popular text-book on "Diseases of Children rewritten and profusely illustrated, which will be cordially received by students and faculty Professor Rotch has also announced a revised edition of his admirable lectures on pediatrics His style of treating the subject and method of illustration of the text to facilitate diagnosis could hardly be surpassed Nor must we fail to accord to the "American Text book on Pediatrics" its full share of merited commendation for its painstaking thoroughness to meet the requirements of our students

While the 'Cyclopedia of Diseases of Children' marks a new era to pediatrics as a monument of talent and enterprise not even confined to this continent, but cosmopolitan in its research and I shall venture to assert as bearing directly upon this subject, that the chapter there on the general diagnosis of diseases of children by Professor Finlayson of Glasgow could hardly be excelled in its comprehensive and systematic details of the great general principles of diagnosis in diseases of children I have never seen anything on the subject so comprehensive and practical

But after all the good work that has been done and is being done to facilitate diagnosis for our young men just entering the medical profession, it remains a lamentable fact that a great many of them are very deficient in the faculty of diagnosis when put to the test on examinations for graduation, and on going before the State medical boards of examiners for certificates to practice medicine At least I am sure this is true of our classes in Minnesota and through the West and Northwest This results from several causes, which we are endeavoring to remedy as fast as practicable, as, 1, insufficient literary education on entering our medical schools 2, too short course of instruction in most of our schools 3, lack of ample facilities for clinic observation in our smaller cities, 4 text-book instruction in this particular line too voluminous for the generally limited time and means of our students

This, then, can only be remedied by 1 higher literary requirements in some of our schools upon entrance examinations 2, longer and more terms of study and instruction in the same (at least four or five years of eight or nine months each) 3 is far as possible a more earnest endeavor on the part of our faculties to afford the students [illegible] ample facilities for clinic study and observation in hospitals, dispensaries, laboratories, etc., 4, possibly, by some good, concise text-books illustrated by copious plates, tables, etc., on the diagnosis of diseases of infants and children, where much of the best literature on the subject might be carefully revised and compiled and presented in the best possible form for the study and limited time and means of our students, only to supplement the good work which has already been done by our popular authors of text-books on pediatrics.

We, in the Northwest, are realizing more fully every year the necessity of raising our literary requirements on entrance to our medical colleges, and are doing so as fast as is practicable, both medical schools in Minneapolis having now raised their entrance requirements to a certificate of graduation from one of our best high schools, or its equivalent of other high-grade schools, and have also lengthened their curriculum from three years of six months to four years of eight months each, and hope to be able soon to go beyond this, thus emulating as fast as possible in the West the best medical schools in the East. Applauding as we do most heartily the great advances being made in such high-grade schools as Harvard, McGill and some others in the Northeast.

The advance has been gradual but continuous, from two years of four months each, and almost no recognition of pediatrics, as in the University of Louisville and many others when I began the study of medicine in 1859, to four years of eight or nine months each, as in most schools at present, and a thorough recognition of the importance of diseases of children in all, is truly gratifying, and the preliminary requirements for entrance to most of our medical schools have been advanced in like manner.

I believe much of the late advance has been stimulated by the rigid exactions of legislation in creating and regulating our State boards of medical examiners for license to practice medicine, especially in our great Northwest.

What then is the conclusion of the whole matter? I think it can readily be summarized about as follows:

The principal factors in acquiring both general and special diagnostic proficiency are 1, time, 2, opportunity, 3, application, and inasmuch as authors and schools are coöperating to encourage as fast as possible longer terms of study, more ample opportunities, and, in every available manner, stimulating the students to more diligent application, and with ever increasing help in all directions, there does not seem to be much fallow ground to cultivate in this field. It would indeed appear that about all is being done to elevate medicine and facilitate diagnosis that can be suggested, and in conclusion will only say, that while I have thus in a desultory way endeavored to emphasize some of the features which my subject suggests, I entertain a painful apprehension that my effort has been disappointing to some of you on account of the *importance* of my theme. But if it only succeeds in provoking a discussion, here, along the lines indicated, I shall have accomplished to some extent, at least, my purpose in presenting it to you, insisting, as I beg to do, that its design has been more *retrospective* and *reminiscent* than otherwise, for it would be difficult indeed to say much new or original on a subject which has been so well developed by the greater minds of the medical profession.

In what proportion of cases in young children, i. e., under 2 years, does the average physician render a correct diagnosis on first examination? Answer. Only about one-half, and in older children possibly three-quarters while an expert may correctly diagnose four-fifths even in young children, i. e., infants, on first examination and in older children nine-tenths.

DISCUSSION

Dr. J. A. Larrabee, Louisville, Ky.—The vital point in pediatrics turns on the diagnosis. In fact, it might be said this is to the general practitioner an opprobrium medicatoris. We all know it is in this department the greatest perplexity arises and the greatest skill and judgment is required, and even then we frequently fail to make a correct diagnosis. Too much education can not be given. And while I have all esteem for one who is accredited a peculiar genius of making instantaneous diagnoses, I believe such men very often make very grievous failures. While we differ from each other in that capacity as in others, I believe it was Michael Angelo who said, genius is only another name for hard work. I do not believe we will arrive at immediate diagnoses unless we do hard work. It is along this line great stress may be laid on educating medical men. The essayist has spoken of diagnosis, but in my mind has omitted a very important part, that is the aids to diagnosis in diatheses. It seems to me the diagnosis is greatly enhanced by the study of diathesis. There is in every one of us a weak spot by inheritance. That which would affect one would not affect another. Hence, in diagnosis we should avail ourselves of all the knowledge we can obtain. We do know, families travel on family lines and disease is more prone to come along these lines. And by seeking along these lines we will be more likely to arrive at the diagnosis than by rambling. I invariably insist, upon the first visit, no matter what the disease may be, on the complete, careful, thorough examination of the nude body. In his advice to his students, Hippocrates said: "View the body outstretched," and that applied to adults as well as children. If we attempt a diagnosis without this, when we have not seen the patient before, we will fall into very palpable errors. How many gentlemen here have had their attention called to a rachitic condition or a case of catarrhal pneumonia, in which the child is dying not so much from the pneumonia as from the general condition? A single pustule may point the way to the disease better than anything else. Thus we are to watch closely, for every little point is a big point. The strain is such we must call in all our senses, and even then we have not quite senses enough. In closing I wish to refer to physiognomy in disease. We must study the countenance of the child and interrogate that.

Dr. Samuel E. Woody, Louisville, Ky.—The diagnosis in children does offer a great many difficulties not encountered in the adult. The absence of the power of speech at that tender age, the excitability of the nervous system, the perversion of the spoiled child, the fear and agitation of the nervous child, offer difficulties to be overcome only by the greatest amount of tact and patience, just the qualities in which the doctors, perhaps, are oftenest failing. And then, again, diseases run a very exaggerated course. The progress of the disease is so rapid, unless we are careful and visit the patient early, we are not apt to detect the symptoms. The history is rapid. As to the physical diagnosis being more difficult in the child than in the adult, I have not found it so. Pain sets its mark most of all upon the child. Look at the face and you can tell the sick child at a glance. I believe inspection gives you more assistance in children than in grown people. The examination of the chest offers greater assistance in the child than in the adult, especially when the child is asleep. Not only can we hear through the chest walls better, but the walls are thinner and we can palpate better. And here lately, since the employment of the Roentgen photography, we find the thinness and translucency of the tissues of the child is very important. Only lately a photograph of a child has been published, in which the outline gave also an idea of the density of the tissues In my clinic we got good results in the examination of rickets The bones made scarcely a shadow, giving ocular demonstration of the diagnosis already made of rickets I don't think, Mr President, there is any field in the practice of medicine in which the diagnosis can be, if the proper amount of patience is used so easy, so thorough and so satisfactory

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SEPSIS OF THE NEWBORN

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia, May 5 8 1896

BY HENRY E TULEY, A B , M D

Member of the Kentucky State Medical Society Clinical Assistant to the Chair of Practice and Instructor in Physical Diagnosis in the Kentucky School of Medicine, Louisville Visiting Physician to the Masonic Widows and Orphans Home Associate Editor and Manager Mathews Medical Quarterly, etc

LOUISVILLE KY

The history of the following case is reported as the text for a few remarks upon sepsis in the newborn, not only because of its rarity, but because of the interest attached to the case in connection with its etiology

Baby T was born on February 1, 1896, of a healthy primiparous mother after a normal though rather tedious labor which had to be terminated by forceps The child was a male weighing about seven pounds, cried well and was quite vigorous

The mother had no vaginal discharge before labor, but a vaginal douche of 1-2,000 bichlorid of mercury was given her upon the advent of the first pain, none were given afterward Her puerperium was perfectly normal and afebrile

As soon as the head was born the eyes were wiped and the face was washed, the first bath being given some hours later The cord was tied with a piece of silk from a skein which had been used the day before in an ovariotomy and some of the same was used the next day in an abdominal operation without further preparation After the first bath the cord was dressed with talcum powder and wrapped in absorbent cotton

During the first three days nothing abnormal was noted with the child, it had a normal temperature, nursed well though apparently not satisfied, slept well and had normal movements On the fourth day a temperature was reported of 101 4 degrees in the morning at 6 o'clock and it had risen to 104 degrees by noon I was asked to see the case at this time by the attending physician, Dr L S McMurtry, by whose courtesy I report it now It was decided that the temperature was a starvation one and that artificial feeding was indicated, it was accordingly put upon cow's milk, well diluted, to supplement each nursing, temporarily, as the breasts were at this time beginning to secrete This reduced the temperature in five hours to 100 6 degrees, and the next day the temperature was normal and the child seemed as well as usual The cord dropped the next day, the fifth, leaving a moist base, which was treated aseptically and dressed with talcum powder The next day the temperature rose to 102 4 degrees and the child was reported as listless and slow about nursing I was asked to see the child again, at this time and on close examination found a retracted umbilicus which, on depressing the edges, was found to contain about twenty drops of pus, this when wiped away showed the base or stump of the cord to be fungous in character The child did not stand manipulation of the parts well, pain being caused when they were cleansed, and there was noted slight distention of the abdomen After thorough cleansing of the navel with a bichlorid of mercury solution, the fungous navel was touched with a twenty grain to the ounce solution of nitrate of silver and a powdered boracic acid dressing applied This dressing was renewed twice daily and the silver solution used as before

The progress of the patient from this time to its death, three days later, is of no particular interest save that the temperature rose continuously and steadily from an initial one of 102 4 to 107 degrees a few hours before its death Baths would reduce this a degree or so, but it would rise again in a few hours It refused to nurse and was with difficulty fed breast milk, which had been pressed out for feeding with a medicine dropper The day before its death it had passed very little urine and had several movements, which were composed almost entirely of mucus The bowels were irrigated with plain water which regulated this condition to a degree and also increased the amount of urine voided On the day it died the skin was very hot and dry and it was put in a hot air bath, but this caused so much prostration that it was removed and stimulation kept up to the time of its death A few hours before this occurred its hands and feet were noticed to become a purplish color, perfectly cold and this condition had extended to the wrists and nearly to the knees before death The abdomen was much distended and tender, the navel moist and the granulation tissue covered with pus, though none could be forced from the vessels by pressure upon the abdominal wall

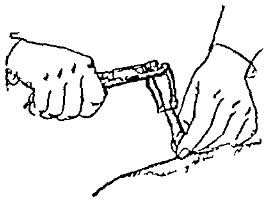
This case is of particular interest because of the following facts The child was born of a healthy mother who had been in the hospital under the daily observation of the physician and nurses for nearly one month before her confinement, the labor occurred under the most carefully prepared aseptic surroundings, in a hospital where a great deal of abdominal surgery is done and no deaths had occurred in more than a year, and that one in another part of the building, it was the first case of obstetrics which had ever been at the hospital, the mother had a perfectly normal and uneventful convalescene and had no vaginal discharge before labor the patient had an experienced trained nurse, on special duty, in charge and more than the usual care was taken with the dressing of the cord, careful bathing and talcum powder being used The question has arisen "Where did the infection come from which caused this child s death?" That it occurred through the navel there can be no doubt

The literature of sepsis of the newborn is very meagre but a number of cases have been reported The following routes for infection have been mentioned The umbilical cord and its stump are the most frequent points of infection among others mentioned by Brothers are the following Accidental injuries or operations with unclean instruments mammary abscess tongue tie or circumcision abrasions of the buccal mucous membrane, or slight injuries to the genitals or anus septicemia of the mother during intra-uterine life premature rupture of the membranes putrefaction of the liquor amnii and aspiration of this by the child causing a septic pneumonia a violent vaginitis of the mother acquired during the last weeks of [illegible] premat[illegible] rupture of the membran[illegible] ns tra mitted from the mother, by means of her milk, when she has septicemia following labor

Jacobi mentions the gastro-intestinal tract as a frequent site for infection, but in his writings, decidedly more prominence is given the umbilicus and its care as a means of prevention of sepsis The pus of an ophthalmo-blennorrhea or the decomposing lochial discharge, he also mentions as causes

In the case reported all of these sources of infection can be eliminated save the umbilicus There were no operations done upon the child, the buccal mucous membrane was normal, the mother at no time had symptoms of sepsis, a vaginitis, or decomposing lochial discharge, and frequent examination of the lungs of the child failed to reveal any lesion

The time of infection in the case can not be decided, but that it did not occur at the time of tying the cord *and its first dressing is certain* There was no septic condition existing in the cord before it separated, as it mummified rapidly and was perfectly dry throughout after the separation It most likely occurred after it became detached, through the fungous navel left, though extra precautions were taken in its care A possible cause, perhaps, was by septic matter being carried through a wet napkin by capillarity, from the alvine evacuations It is a common complaint of nurses that boy babies are with much more difficulty kept dry, on account of the napkins being wet high up, thus soiling the bands and cord dressings



It does seem queer, however, that sepsis should have existed in this case, in which every attention was paid to the details of asepsis and antisepsis in the lying-in-room, especially so when we think how common it is for no dressing to be applied to the cords of children of the poorer classes, or if one is applied it consists of a greased cloth, after which gangrene is the more apt to occur, or simply a rag with a hole burned in it, with ashes or soot as the drying powder

However, the occurrence of sepsis in one case, where every care has been taken to prevent it, should not encourage us to relax our vigilence in preventive treatment The treatment is still mainly preventive, and in the majority of cases, sepsis can be prevented In a series of 222 cases at the Sloane Maternity Hospital, New York, personally seen by the writer, no case of sepsis in the newborn occurred and no trouble with the navel The possibility of its occurrence, however, should always be kept before us, careful sterilization of ligatures and instruments used in severing the cord should be had, as well as of the hands before this is done The ideal ligature is the rubber one, and the difficulty has always been in obtaining a method of applying, but in the ingenious instrument devised by Dr A C Kellogg, which I take pleasure in exhibiting, with which a small rubber ring is applied to the cord, all danger of sepsis from the primary ligature is obviated because of its ready sterilization, and hemorrhage simply can not occur

The after-care of the cord is important, there should be a separate bed for mother and child, careful cleansing of the hands before bathing the child, which should always be done before the mother is attended to, the avoidance of fatty applications to the cord and the use of drying powders to facilitate the mummification, a very good formula being salicylic acid and pulverized starch, one part to eight

The care of the cord is of less importance than the care of the stump, every detail in the treatment of any surgical wound should be observed here Should there develop an omphalitis, gangrene of the umbilicus, an arteritis or phlebitis, the most active stimulation is indicated with prompt attention to the proper cleansing and antiseptic treatment of the stump, the only precaution being the avoidance of carbolic acid as an application The symptoms of them all are more or less similar, local appearance of the inflammation at the umbilicus, it being generally bathed in pus, peritonitis is always present to a greater or less degree, also pain and tenderness especially during the bath, and a septic temperature

However, there may be no symptoms, the condition being recognized only at the autopsy table

111 West Kentucky Street

DISCUSSION

Dr J A Work, Elkhart, Ind —What substance do you use on the cord as dressing? Answer Cotton

Dr W B Parks, Atlanta—I would like to ask the Doctor if it would not be well, in the large cords, to make a little massage and lessen the size of the cord before severing it That can be done without any injury, I think, if you dress the cord near the child and manipulate outward By a little compression in this way, you can lessen the edematous condition I have done that myself quite successfully in a few cases I never like to tie these large cords for fear of there being too much to be absorbed

Dr A C Cotton, Chairman—The advantage claimed for the rubber is its constant elasticity gradually displacing the Wharton's jelly

Dr Hatch—I have never lost a child under those conditions in my entire practice It has been my practice during the last ten years, not to sever the cord until the placenta is born, and since I have adopted this method have had better success with the children and they get along better I do that uniformly and so far as having sepsis is concerned I have for a great number of years used thoroughly sterilized silk in tying the cord I can see the advantage of this band Last spring I tied one of those large cords and thought I had tied it thoroughly, and imagine my surprise when a few hours afterward I was sent for and it was said the baby was bleeding to death I can readily see the constant pressure of the elastic band would have adapted itself to the cord as the edema diminished The hemorrhage in this case was due to the edema leaving the cord, allowing the ligature to slip off

Dr Gray—I have been in the habit of doubling a small rubber band three or four times and slipping it over the cord I have done that several times when there was considerable jelly of Wharton, with good results

Dr J H Ross—In the country where I practice, I think it is the custom to use almost any substance at hand for ligature I prescribe flax or cotton thread But I invariably ligate the cord before I cut it off, and it occurs to me now that perhaps the chances of infection would be lessened by the ligation being made before the cutting is done We have not been using, in country districts, antisepsis about the cord and I do not remember a single adverse occurrence in the history of many hundreds of cases

Dr A C Cotton, Chicago—Well, we have tied the cord with almost everything I have tied it with shoestring and with a hair string from the head of the woman a good many years ago, and no ill results ever followed it The only case I have ever had of infection from the navel was long after I had been connected with a hospital and had been taught surgical asepsis and practiced it In my experience and observation sepsis from the navel is a rare thing in our city, and midwives take no aseptic precaution at all in many instances That it should follow in the practice of men who observe aseptic precautions religiously and not occur in the practice of people who do not know the meaning of the word "asepsis" is a mystery to me The discharges ascending the napkin by capillary attraction, is an argument that has been used by myself, as those will remember who heard me at Baltimore and the Illinois State Medical Society last year I have substituted an absorptive pad making the diaper simply a key bandage to hold the pad in place, the pad being made of such material as to absorb readily, so the outer retention band is not wet at all

Dr **Henry Tuley**, Louisville, Ky —In the case I have just related the enlarged cord extended fully five inches directly from the navel of the child and it would have been impossible to strip this so as to get a good place to tie the ligature That case was used as an argument for the rubber ring In the series of 272 cases there were some twenty or thirty cords which bled secondarily, after the tying of the ligature In some very fat cords hemorrhage would occur I think this case stands as a unique one and one which I can not fully explain as to the cause of infection Every precaution possible was taken with the case, because it was a patient recommended to Dr McMurtry by a friend in Glasgow, and under that recommendation it was with the greatest care the case was watched Without any further preparation the Doctor used the ligatures the next day in an abdominal operation But still that possible cause of infection should not be forgotten I think it does sometimes occur in that way I was approached last year by a prominent professor in one of our colleges in Louisville and he said "What are you going to say about the umbilical cord?" I detailed to him the case I suggested He said "That is all a mistake Just recommend it be left alone entirely, just turn it loose and it will take care of itself" To my personal knowledge this professor has had several deaths in the newborn, and I think if he would examine them carefully, get an autopsy, he would find the cause to be sepsis We know sepsis occurs most frequently from the navel

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CHOREA

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY HENRY HATCH, M D
QUINCY ILL

In discussing the subject of chorea I am well aware that it may, at first thought, seem a dry subject to you But in bringing up this subject it is that I may awaken new life, and bring forth new ideas, and thereby get a more tangible and satisfactory understanding of the etiology and pathology of this very troublesome disease Troublesome, not alone to the patient and friends, but troublesome as well to the physician, on account of the tenacity with which it holds to its victim No disease causes more anxiety than this disease, chorea, for it is often hard to convince an anxious mother, when her child is never still on account of the violent nervous movements and excessive agitations, that it is not very ill, and that you do not expect a serious outcome

To launch out in a new channel may cause you to exclaim, mentally, "Another needless exploring expedition setting out on the pathless sea of chorea," with no definite port in view, and with an uncertainty regarding the existence of such a haven

Chorea has been and is one of the pathologic dumping grounds of the medical world, and many a man has spent tireless hours in medical research, to find a remedy which will relieve this troublesome disorder In this space the theorist throws his theory the pathologist his odds and ends, the moralist adds a few of his trite sayings and as a result there is a stupendous wilderness of unknown depth and uncertain quantity No one has penetrated successfully this wilderness many have tried, and if no other good has been done, the ground has been almost covered with their failures, so that before long we will be able to traverse the entire field by passing from one failure to another Each man can go a little farther than his predecessor, by using as stepping stones the perished efforts of those who have gone before

The term chorea, coming from the Greek word chorea, meaning a dance, has been handed down from the middle ages About the fifteenth century England was overrun with dancing, or shaking fanatics, many of whom were sent to prison, as having the devil within them People of seemingly deep religious desires and tendencies were afflicted, for they looked upon it as an affliction and a direct visitation for sins, with an unaccountable dancing, jerking, shaking, or muscle tremor of some sort, this was purely psychic During the fifteenth century the city of Strasburg had so much of the trouble that the magistrates ordered the afflicted ones to the chapel of Saint Vitus, to do penance, and to pray for relief Here is where the term "St Vitus dance" probably originated It may be of interest to us that St Vitus was a Sicilian, and a pupil of St Modestus, both suffering martyrdom as Christians under the persecutions of Diocletian, in the year three hundred, thus gaining their canonization St Vitus, however, does not hold the undisputed claim to the name of the disease, for in other parts of Europe it is known as "St Modestus' dance," "St John's dance" and "St Anthony's dance" Each saint was supposed to have curative measures in his keeping Many other terms have, at various times been applied to it One old author speaks of it as melancholia saltans saltare meaning "to dance" Another as paralysis vacillans Another as ballismus from the word signifying "to leap" Again it is known as epilepsia saltatoria as orchestromania, or the dancing madness These terms all relate to the psychic disturbances of hysteric character

Chorea proper, or Sydenham's chorea, is the disease as we recognize it to-day, while the Germans make two classes of it—chorea minor (our chorea) and chorea magna, hysteric manifestations, some of which simulate true chorea

The disease is preeminently one of early life Dr Stephen Mackenzie has a record of 439 cases with the following percentages Thirty-four per cent developed between the ages of 5 and 10 years forty-three per cent between 10 and 15, sixteen per cent between 15 and 20 years, with the largest general percentage for the thirteenth year Sée reports 513 cases, and 453 of them between the ages of 6 and 15 Sinkler 282 cases, with 217 of them between 6 and 15 years of age There is on record one case in a patient 78 years old My own experience gives me a record of forty-six cases, the oldest of which was 40 years, and a man Most of my cases have been before the period of the seventeenth year and almost all of them have been females The records of the same authors show that chorea, while a disease of early life is most frequently a disease of early female life, as my own experience has shown It follows closely or closely precedes the puberal epoch in the girl Gower who has made a deep study of the subject and who has a record of *more than one thousand* cases gives but 315 cases found in the male Sa[illegible] h l [illegible] t of seve[illegible] cases, found twenty-one [illegible] the [illegible] finely balanced nervous organization of the girl, brought up as she is, more of a hot-house plant than her brother, leading a sedentary life and under very artificial surroundings, forced to exert a growing and naturally irritable nervous system by close application to books and music, this, I say, may account for the preponderance of the statistics for the female

Chorea is one link of the chain of hereditary troubles It is the experience of many authors, and has been the result of my own observation, that alcoholism is a very prominent factor in the production of chorea Especially so when a woman becomes impregnated by her husband when in a drunken debauch Morphinism and pulmonary tuberculosis, by transmitting vitiated constitutions, are also prime factors in the production of this disease Epilepsy or migraine is frequently found in the parent of a choreic child We can not say, properly speaking, that chorea is inherited, but we can say that either its vitiated constitution is inherited from a parentage which is not healthy or that it has a choreic tendency These are hereditary land-marks The diminished vigor, the inactive cell structure, the nucleus and nucleolus burdened with inanition are tissues prematurely old. And how often have we seen children born that are young in years, but carrying the prematurely old constitution! It is a disease that believes the old adage that "Blood is thicker than water" Arising perhaps from one ancestor, say a maternal grandmother, who may have had a clear history so far as ascertained, it manifests itself in one or more members of the family, usually choosing the one whose nervous organization most closely resembles that of the ancestor, a lasting heritage from generation to generation

It is not necessarily a racial affection While some writers claim exemption for the American Indian, their claims are not substantiated, and we must admit that chorea is like the rain from heaven, falling upon the Jew and the Gentile, the just and the unjust, the rich and the poor Weir Mitchell claims relative immunity for the Negro race, and so far as my personal experience goes, having come in contact more or less with the Negro race, both in hospital and private practice, I have never seen a Negro afflicted with this disease or anything which had a semblance to it, but Sinkler reports several cases among the colored people While both the Negro and the Indian have been subject to a tremendous strain for generations, it has been a physical rather than a nervous or mental strain And it is usually people of the higher and more sensitive nervous organizations that have this disease among them What is not conducive to the production of this disease is the fact that the Indian and the Negro live a rugged, out door life Climate and climatic influences can not be said to give much light upon the subject Season of the year is also an obscure factor, if a factor at all Rainy, oppressive days are more favorable to the development of the disease than bright, sunshiny ones, if there is already a predisposition toward the disease It has been my experience that most of my cases have come to me in the latter part of the winter Most of them have been school children, and I could often understand why they were afflicted with the disease They were the offspring of parents of a highly nervous organization, who were anxious that their children should appear well in public, and many of them had instilled into the minds of their children the idea that they must be at the head of their classes Take into consideration our modern system of forced education among children, the child must go to dancing school, take music, have five or six studies, and then they all have their little parties, keeping them out late at night Is it any wonder that many of these poor children succumb under the burdens their parents press upon them? Even children are subject to blues, and disagreeable days are bad for that ailment I have not forgotten my own many despondent and blue days when I was a child, when things did not go right All are too prone to forget that we were once children ourselves, and are therefore not apt to give children enough sympathy in their little troubles

According to authorities which I have looked over, March gives the highest monthly percentage of cases and this corroborates my own observation The greatest number of cases in a given locality will arise at the season in which the greatest mental or nervous strain is put upon the children, and in our present system of civilization the spring months, when the child is anticipating its final examination, is usually the period when it has the greatest strain

Concerning the true etiology of this disease there are many theories The ancients believed that the afflicted person had a devil, and efforts were put forth to exorcise the malignant spirit They made vows, did penance, went on pilgrimages, and were doubtless benefited in so much as may arise from a fashionable method of treatment, of to-day, known as suggestion These pilgrimages also were beneficial in themselves, from the fact that the people who made them got more out-door exercise, consequently more fresh air and less nervous tension

The definition given of this disease by Sydenham in 1686 is very interesting "St Vitus dance is a sort of convulsion which takes boys and girls from the tenth year until they have done growing At first it shows itself in a shaking or unsteady movement of one of the legs, which the patient drags Then it is seen in the hand of the same side, which the patient can not keep a moment in its place, when it lies upon its breast or any part of his body If any vessel filled with drink be put in his hand, before it reaches his mouth he will exhibit a thousand gesticulations like a mountebank, and on this account, if he is associated with other children, he becomes the mark of derision, which is always detrimental to his condition He may hold the cup out straight, as if to move it to his mouth, but has his hand carried elsewhere by sudden jerks Then perhaps he contrives to bring it to his mouth If so, he will drink the liquor off at a gulp, just as if he were trying to amuse the spectators by his antics, or was afraid he would not get the water, or fluid, if he did not drink it hastily Now this affliction arises from some humor, falling on the nerves, and such irritation causes the spasm"

Not an entirely lucid definition, but with all the wealth of medical knowledge gathered from then until now, we are forced to confess it is about as good as the one of to-day It was said in the history of the disease that many causes were assigned for chorea Age, sex, race, seasons, contagion by imitation, no doubt have each some effect on the origin of the affliction Sinkler reports a case in which a trauma seemed to be the cause Others attribute the development of the disease to some reflex irritation, phymosis, intestinal parasites, pharyngitis, eczema, urticaria, eye-strain menstrual changes, etc While it can not be definitely said that any one of these is the cause of chorea, it is self-evident that any one of them may place the little patient in a more favorable condition for its development Many authorities attribute the eye symptoms to chorea, and not chorea to the eye-strain There is, however, a disease with which chorea goes hand in hand—arthritis One might say that the excessive motions which we find in chorea could be the cause of this condition One author says that in five cases of arthritis you will find one case of chorea It has either been my fortune or misfortune not to have this complication to any great extent The same author says in five cases of chorea you will see three of rheumatism One cause of the rheumatic disorder is the fact that it is difficult to keep choreic patients in suitable surroundings, on account of their nervous agitation Copeland, an English writer, says, too, that the rheumatism when associated with chorea, has a marked tendency to leave the joints and extremities and to attack fibroserous membranes, as the pericardium and cerebrospinal envelopes Another author (Rogers) goes so far as to declare that it is his belief that articular rheumatism, endocarditis and chorea are simply three phases of one and the same disease, while Osler states emphatically that there is no known disease in which endocarditis is found so constantly, postmortem, as chorea

I do not think it is fair, when we make a postmortem of a patient and find endocarditis, pericarditis, or any other "itis" in a patient who has had chorea to say that death was the result of the latter disease Is it not better to say that on account of deficient vitality or a vitiated constitution, the child became a victim of chorea, which so debilitated the constitution that it became an easy prey to the more severe disease, endocarditis or pericarditis, etc, and that death, instead of being the result of chorea, was produced by a disease, or diseases that follow in its train, as the indirect result of the deficient vitality or vitiated constitution On the other hand, it is usually acknowledged that where both arthritis and chorea are present the arthritic symptoms appear first Hirst says there is a common toxic product, which if it affects the cortex, produces chorea How Hirst has been able to ascertain this I do not know, because it is seldom, and I believe never, the case where a postmortem has been made, that the patient has died from plain, uncomplicated chorea Hirst further says if it turn its attention to the joint surfaces, there is a rheumatism This theory presupposes a locus minoris resistentiæ Sachs believes that in 33 per cent of cases either endocarditis or myocarditis precedes the chorea, and in about the same proportion of cases is found an organic lesion, usually a mitral systolic, while in a great proportion of the cases is heard an anemic murmur, which usually disappears with the chorea

Among the causes assigned for chorea is pregnancy of the early months, and a pregnant woman who has had a previous attack is especially liable to a recurrence at this period On the other hand, I have seen women who had attacks of chorea very much benefited by pregnancy and the resultant childbirth Among other cases may be mentioned the exanthemata and anemia Anemia is found in all cases of chorea, which clearly shows mal-nutrition But it is rational to think that the anemia is merely a step in the causal relation, and not an original factor Anemia may be called a reasonable factor in many cases, for if a child is well nourished with good, healthy, rich blood, I believe it is impossible for it to have chorea Chorea has also been observed to follow the toxic use of many medicinal preparations, notably the poisoning which some times follows the use of iodoform This is brought about by the fact that drugs of this character have to bear on the red corpuscular element of the blood

Chorea has been observed as an intercurrent with nearly all the more common diseases

Even more intricate and diappointing than the etiology of the disease, is the pathology One unfortunate circumstance in the state of the pathology of this disease is the fact that it is very doubtful and improbable that any case of simple, uncomplicated chorea ever died, and so-called cases of choreic death have not been produced by the chorea proper, but by some complication

Chorea, like hysteria (to which I believe it is closly related), in the first stages is assigned to want of nervous equilibrium due to diminished nutrition, which results in nervous congestion, brought on by overwork or excitability And if we could always have the cases in this first stage, I believe all could be guarded against complications, and be cured

The varied pathologic conditions reported as found in choreic patients, and given as causes for chorea, or results of chorea, form a public confession of our ignorance regarding the subject Its microbe has been earnestly sought for, but the search has produced nothing but disappointment Pianese and Dana each declares that he has discovered the bacillus, which when cultivated gives ptomains, and the injection of this substances causes chorea Pianese substantiates his claim to some extent, but his microbe is not yet accepted The staphylococcus pyogenes aureus is frequently found in the endocarditic vegetations of the choreic patient, and in one instance has been found in the blood That there is a microbe scarcely admits a doubt, as the endocarditis, pericarditis, arthritis, and sometimes septic thrombi, peritonitis, pleurisy, pneumonia and other afflictions, diseases due to direct microbic infection, or to the absorption of ptomains, clearly prove, for these diseases are the comites of chorea Postmortem pathology in chorea shows that this chorea microbe, or microbes (for there may be two or more varieties working in harmony, as may be seen in combined scarlet fever and diphtheria, and in this way account for the frequency of the intercurrent afflictions) gives its attention to the structures of the nervous system, and here the pathologic conditions are so varied and so numerous, that it is difficult to select the one for which the chorea is responsible, and find the one due to some intercurrent disease Hence there have been found hemorrhagic infracts in the lenticular nucleus, cerebral hyperemia and edema, and the same condition in the cord, vacuolization of the nerve cells and nerve trunks as in syringomyelia and hydromyelia hyalin degeneration of cells in cortex and basal ganglia, the motor cells hyperplasia of neuroglia, the expected result in chronic chorea, and a condition which remains after recovery from the disease Starr thinks that where mental symptoms predominate, the cortex is the seat of the degenerative process and that when the symptoms are chiefly muscular that the lesion is cerebral There has also been found an [illegible] diffu tion of cellular elements of the cord into the adventitia of the blood vessels supplying that structure, or pathologic karyokinesis It is of interest to note that the favorite seat of the pathologic lesion is in the corpora striata

In comparison with the definition of Sydenham let me give a modern one that of Dickenson "An unnatural hyperemia of the nerve centers, not due to any mechanical exertions but produced by causes, mainly of two kinds One, a morbid influence which may affect the nerve centers, as it affects their organs and tissues The other condition is usually mental, but sometimes what is called reflex, which especially belongs to, and disturbs the nervous system, and affects persons differently, according to the inherited morbidity of their natures"

Having discussed the natural history, etiology and pathology of chorea in a rather hasty manner we now come to the treatment, and in my opinion every case of pure chorea should be cured, and especially so if we can have fairly good surroundings, with fairly sensible people to take care of the patient It does not require wealth nor any great ability for the nursing of this class of patients, but it does require a good physician, who thoroughly understands the special constitutional condition of his patient, and understands the results and the action that he may obtain from the drugs which he will use First the patient with chorea ought not to be excited by much company, and if it is a child it should not be associated with other children, from the fact that children, seeing the constant nervous, and apparently senseless movements, of their companion are very apt to laugh and make fun of him, or her, and consequently destroy what little confidence the patient may have in its ability to control its movements The patient should be kept clean, should be frequently bathed, well rubbed after each bath, and be placed with cheerful, happy people His surroundings and companions should be restful If it is an exceedingly bad case the patient should be kept in bed as much as possible, and if the motions are violent to the extent that he bruises himself, it is also well to put on a jacket by which you can fasten his hands Massage treatment is very beneficial in these cases If the child is anemic he should have iron If he is poorly nourished, and does not eat enough food, he should have cod-liver oil If he comes from syphilitic or tubercular parentage, his treatment should be directed to these peculiar points All sorts of remedies have been recommended for the treatment of this disease (Shoemaker forty-seven, Bartholow seventeen) Arsenic, zinc compounds, cimicifuga, antipyrin, chloral, sulphur, quinin in large doses, opium, digitalis, and I might mention a host of other remedies, but it is unnecessary Then as toward treatment during the changes in action If in pain, plasters In endocarditis, potassium chlorid Now all these remedies may be well in their places, but there is one remedy upon which I place my greatest faith, and that is strychnin I have given it so much that I have come to look upon this drug as a specific in the treatment of this disease, and no matter what complications I may find, I treat each complication and hold fast to my strychnin I give it about every four hours, beginning with the one hundred and twentieth of a grain, and gradually reaching one-sixth, and then continue it for an indefinite period, or until my patient gets well In connection with that I give digitalis, or iron or cod-liver oil, or salsoda where indicated, and if my patient is very restless, and he needs rest I give chloral, potassium bromid, morphin and sulfonal, as I think best for each special patient

And now as to the prognosis of this disease I believe that every case of pure chorea should, and can, be cured If you will study the peculiarity of your patient, and follow the remedies as indicated in this paper, if you can control the parents, you can absolutely say when a case of chorea is brought to you, that it will surely be cured

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MAN'S BRAIN AND MIND

THE FORMER SOMETIMES INSANE, THE LATTER NEVER

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY G W DRAKE, M D

CHATTANOOGA TENN

Man's brain is the storage battery of energy, the seat of consciousness and the organ of the mind From it are transmitted by nerve fibers, energy for the functional activity of all organs and the vital metabolism of all tissue cells In it are localized areas for the reception of energy and the perception of sensations

A sane brain is one in which all its cells and cell derivatives, fibers and other material substances are in a normal condition chemically, physically and vitally

Chemic analysis of the different parts of the brain is not alone sufficient to enable the neurologist to judge of its sanity, nor is a microscopic examination adequate Because neither will reveal the relative position of molecules in a cell or atoms in a molecule, upon which in my opinion the normal function of the parts depends, as also the kind, number and shape of the molecules, together with their atomic structure When the cerebral centers are in a normal condition, the brain is sane, otherwise it is insane When the dominating brain centers which supply functional energy to the various organs and tissues of the body are not perfectly sane there can not be perfect function None of these centers are in a condition of perfect sanity and there is no organ or tissue that is perfectly healthy in function The consequence is that the period of activity of every tissue is limited and it can not exist perpetually It must sooner or later cease to manifest life, dissolve into its original elements and return to the dominion of chemic energy, as the dust of the earth This is the common lot of all vital tissues The source of their vital energy is finite, and they are consequently doomed to inevitable exhaustion

Passing from the involuntary centers of the brain we come to consider the centers of conscious sensation, the habitat of consciousness

Man is a triune being, consisting of a material, a sensible and an intellectual ego These parts are usually denominated, body, spirit and mind Contrary to the doctrine of the scientific Christian and that of the christian scientist, I do not believe in the existence of mental diseases, nor diseases of the sensible ego Disease, I believe to be a disarrangement of the normal arrangement of matter in the structure of one or more cells of the body The gravity of the symptoms depends on the locality and the number of the cells affected So-called "functional diseases," all have a material cause, whether the physician can find it or not So long as the material structure is normal the functional activity will be normal The sensible ego, or consciousness, is always ready to exercise its faculties in the various brain centers of sensation where it is situated, viz, those of hearing, feeling, tasting, seeing and smelling The peripheral and central organs of the five senses must be in health in order that the sensations may become conscious of normal impressions All the cerebral centers of the special senses are more or less insane, and there does not exist perfect vision perfect hearing or perfection of any of the sensations Everybody is color blind to a degree, and there is a degree of imperfection in all the senses owing to material disturbances There is a material basis for every pain and every subjective symptom of disease or discomfort The sooner physicians recognize this fact and bring to bear their materia medica on all material disturbances, the better for the patient Let not christian science, spiritualism, faith cure and other kindred humbugs lead astray the grand old profession of scientific medicine The best brains of our best doctors are to be relied on as bulwarks of defense against the cunning novelties which are attempted to be introduced into therapeutics Suggestion and hypnotism as therapeutic agents can be effective *only* as the *material* structures, the seat of the diseases, are responsive to their action Imaginary diseases are real material images and should be treated as such The intelligent physician should search diligently for the concealed picture before attempting to efface it Therapeusis based on mistaken diagnosis may lead to disastrous results It is possible thus to make a diseased image where one did not previously exist Insanity of the intellectual centers of the brain is the form usually denominated mental insanity, and its subjective symptomatology can be learned by studying that of the so-called "mental diseases" The function of these centers is to manifest the faculties of the mind, and it is essential that they be in perfect order to make a perfect reflex of mental action Any derangement of matter or departure from the normal standard more or less unfits these organs of the mind for their physiologic work Every case of insanity should be carefully studied etiologically, with the view of cerebral localization of the seat of diseased tissue After the discovery of the part affected, a rational materia medical course of treatment should be instituted in conjunction with suitable hygienic environment Disarranged brain substance in the intellectual centers can not make a correct manifestation of the faculties of the mind Brain culture as a physical science has not hitherto received the attention which its importance demands The cerebral centers for special senses, together with those for the higher faculties of the mind should be duly exercised for the purpose of enhancing their capacity By systematic physical culture of these centers the equilibrium of the brain may be maintained, and in this way insanity be prevented in many cases Brain sanitation is conducive to sanity, and I may here interject that watering the brain copiously is a measure of great hygienic value as well as an essential therapeutic procedure Water the sick of all diseases, but especially those sick of insanity

I pass to a brief consideration of man's mind This is the the terra incognita of the anatomist and will ever continue so, for it's not of the earth, earthy Mind is a general entity, specialized in man and individualized in a particular man Man's mind is the first person of the human "trinity" and is made in the likeness of the first person of the divine trinity It is the supervisor and supreme director of the material man The brain is its organ, but its habitat is unknown It may dwell in some localized area or it may be ubiquitous The minds of all men I believe to be equal, but there is great diversity in the structures of the brains or mind organs of different individuals The mind of the fool or idiot is equal to that of the most brilliant philosopher The mind of the newborn babe is equal to that of the full-grown adult There is, however, a marked difference in the manifestations of mental action in different classes of human beings, owing to the difference in the material composition of their brain centers These brain centers may be cultivated and developed by use They may be brought nearer and nearer to perfection and become better organs of the perfect mind The mind does not develop or deteriorate The nearer the mental cerebral centers approach perfection, the grander their *manifestations* of the *conceptions* of the *mind* The farther they fall below the normal standard the feebler they portray the mental faculties and the more imbecile their individual possessors Great thinkers are all men, young and old, ignorant and educated, sane and insane or idiots, but great also is the difference of the brain impression of their thoughts

The mind is never insane It belongs to that class of imponderable agents or energies which was created perfect in the beginning It requires a certain adjustment of matter for its manifestation, and the better this adjustment the better the manifestation

There can be no change in the mind, but only in its mode of action through a change in the cerebral apparatus Defective machinery makes imperfect movement however perfect the motive power Electricity is the same, whether it turns a simple wheel or is applied by suitable adjustment to the most complicated mechanical contrivance It is no more and no less electricity whether it runs the street car or the wheel of the fanning machine It never gets out of order and never needs repair So with the mind, its brain machine may break down and need adjusting, but the mind can not be injured by traumatism, autointoxication or bacterial toxins It can not be pierced by the bullet or cut in twain by the knife, it fears no evil from without, its only concern is for its fellow entity, the body, from which it must sooner or later be separated The body will crumble away and return to the dust as it *was* and the spirit to 'God who gave it, but the mind will roam about in the unseen universe and wait for the resurrection of the body After the resurrection, the mind will preside over a perfect body and spirit, and redeemed man will be a perfect triune being in the image of the Triune God *Cerebrum sanum in corpore sano* is all that is needed to complete the perfect man The *mens sana* needs not a physician Brain culture should constitute a prominent department of physical culture Brain development should not be neglected in the present craze for muscle training A systematic *curriculum* of exercises should be arranged for training every sense organ with reference to its better education The courses in music, painting, sculpture, etc should be studied with reference to their importance in brain culture Every sound every picture every form every muscular movement makes its image on the brain and contributes to its development The brain is the highest organ of the body in position and importance In it mind, spirit and matter meet to form the triune man in the image of the Triune God There is no difference in the members of the human family, Hottentot, Mongolian or European, as to their minds, the difference is only in the structure of their brains After death and the resurrection all the redeemed of Adam's race will be equal

Often on the thoroughfares of crowded cities, in the parlors of the devotees of fashion, in the offices of money dealers and in the haunts of the busy fortune hunters, I have tried to imagine the appearance of the brain structures of the different types of the *homo genus* and compare one with another Shape of head, contour of face and form of features furnish a slight index to the hidden form and individual structure of the brain The behavior of the individual is the best criterion of the sanity or insanity of his mind organ The conduct of every individual must be compared with that of the highest type of man and his brain can be graded thereby with accurate precision

Faces may deceive, pomp of wealth or foible of fashion may conceal, but truth will out and show by character the inwardness of the brain The brainiest men are those whose habits of life are nearest perfection The world is full of deformed brains

A NOTE ON THE PATHOMENTAL EFFECTS OF DEGENERATIVE HABIT

Read in the Section on Neurology and Medical Jurisprudence at the Forty Seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY H S DRAYTON, M D , LL B

NEW YORK

In his play, "Two Gentlemen of Verona," Shakespeare makes Valentine say—

> "How use doth breed a habit in a man "

In this remark we have an expression of psychological truth, that three centuries of later observation has not been able to gainsay The disciples of heredity have availed themselves of the apparent effects of habit impression in formulating their creed, employing them as evidence of a double meaning, especially if they were of a degenerate nature "Evidence here," they would say, "of congenital predisposition, to think and act in lines that enfeeble mind and pervert body " The pessimistic speculations of a Schopenhauer or a Nordau may echo the opinions of medieval prophets of a fate-bound destiny, and find a hearing in a certain class, but the cheerful, sunlit view of a better future for him who seeks it earnestly is finding a larger recognition among the sober and thoughtful year by year In the field of anthropology there does not appear that tenacious insistence upon the preeminent influence of heredity that characterized the discussions of ten years ago Manouvrier, Brouardel, Magnan, and others of authority refuse to admit the existence of any distinctive type of nervous organism for the vice-bound and criminal, and contend that it is not so much the inheritance of a disposition toward conduct of an irregular, vicious nature as it is the social relation into which one is born or in which he lives, *le milieu*, that should receive consideration, when we commence to trace the etiology of moral perversion and crime In the Paris Congress of 1889 M Manouvrier argued with great force upon the principle that the commission of acts in violation of law did not demonstrate a morbid type of constitution but rather a certain caste of temperament and unfortunate surroundings

Dr Henry Maudsley, once a pronounced apostle of heredity of the severer class, said lately in answer to the question "Is a man hopelessly chained down by the weight of his inheritance?" "By no means, for there is something else besides inheritance that makes fate, and that is education It is a physiologic law that the brain throughout infancy, childhood and youth grows to the circumstances with which it is placed, and therefore the actual development of a brain may be as much influenced by the kind of nutriment supplied to it as long as it grows "

The verdict of psychology is substantially in keeping with that of physiology Sully, for example, in "Handbook of Psychology," writes "In the present state of knowledge heredity only helps to account for comparatively few among the host of peculiarities that go to make up the natural phases of individual character External influences cause variations No two are subject to the same influences The school, the circle of friends, the business, etc , differentiate minds The body takes on a form of growth because of the special line of habit in eating, exercising, etc , of the individual So the mind grows on what it is fed in the daily life Lines of mental growth will be to some extent predetermined by innate capabilities and tendencies, but these only partly limit the process, they do not fix its precise character The particular ideas and connections of ideas that form the intellectual habits fix the peculiar coloring of the feelings and the special lines of conduct will all be determined by the character of the surroundings " A particular trend of thought now becoming popular in educational circles is derived from a philosopher of a century ago, Herbart and which accentuates in stronger terms than those of Sully the effect of education According to Herbartian pedagogies children have at first no real moral character but acquire it through the union or association of acts of will that have a moral quality It is the business of training to bring all classes of will action under the dominion of moral maxims in order that "a symmetrical passion for good" may be created Thus it is clear that in the Herbartian doctrine it is the tone and quality of the general habits that determine the character, and these habits are not fortuitous, or predetermined by birth

As to the effect of habits, however acquired, it is undeniable that they produce in time conditions of mind and body that in themselves reflect a healthful or injurious nature Are the habits of a vicious kind? Persisted in they accomplish alterations in the substance and relations of the cerebro-spinal organism that are abnormal and degenerate Thus the soil of mind becomes more appropriate for the generation of evil fruit than for good The benign elements become feeble and uninfluential or so perverted that their response to suggestions of a vicious sort contributes to moral disorder

The studies of the cerebralist have shown that the form and constitution of the brain bear a particular relation to mind capacity and character We know that certain endowments of structure render one more susceptible to the adoption of manners and habits of a coarse and perverting nature Benedikt, Lombroso, Maudsley, Spitzka, H Mann, Allen, Buttolph, etc , have discussed the characteristics of structure that may dispose a man in certain relations of suggestion to respond to impulses of an unlawful kind Dr Maudsley remarks, "All broad-headed people are very selfish, that is, all who have the head broad in proportion to its length An undue preponderance of the breadth of the head throughout the region in which they (the phrenologists) place the propensities indicates with certainty an animal self-love which can scarcely be trusted at all times to adopt only fair means for its gratification " The London professor, arguing from the relation of the anterior brain lobes to intellect further remarks, "The bad features of a badly formed head would include a narrowness and lowness of the forehead, a flatness of the upper part of the head, a bulging of the sides toward the base and a great development of the lower and posterior part, with these grievous characters might be associated, a wideness of the zygomatic arch, as in the carnivorous animal, and massive jaws " Such a development of brain intimates the possession by nature of strong animal instincts, and a comparatively weak endowment of those sentiments that inspire kindness, sympathy and deference Upon such a stock it were easy to graft habits of a vicious sort through exposure to surroundings that are degraded and brutal

Thought habit then has its coördinate factors in the cerebral substance, where molecular changes are produced with facility and effect correspondent to the duration of the habit Repetition operates not only to render these molecular changes more rapid and easy, but is productive of growth of nerve substance of a special sort, an evolution correlative to the habit acquired The motor areas of a trained artisan are more extensively furnished with appropriate cells than those of an office clerk The use of hand and arm stimulate action and consequent cell proliferation in the anterior and posterior ascending convolutions The artist develops those centers of form and color that are of daily employment in his profession and they become noticeably marked in his cranial physiognomy Professor Gates of Chicago experiments on the color sense of dogs and proves that the enforced exercise of that sense for a period had a result in decided increase of brain tissue in the color area

Conversely, disease of mind faculty is attended with declension and disease of the cell elements of the coordinate center and decline in strength Any habit, therefore, that inhibits or suppresses the activity of an important intellectnal or moral faculty disturbs the mental balance and impairs the integrity of judgment in no trifling degree This impairment if not compensated will go on until pronounced insanity results Interference with the normal function of any physiologic organ continued or frequently repeated causes deterioration of that organ and of its cerebral center of nervous supply This deterioration implies either functional decline or positive disease of the reciprocal parts Habits that contribute to the maintenance of health oppose tendencies to disease, of whatever nature the disease may be The late Sir James Coxe, in his enumeration of the six leading causes of physical deterioration that may eventuate in insanity, places "dissipation of various forms" first, because habits of dissipation affect the nervous system more directly and certainly than other causes The specially conspicuous of these habits are Alcoholism, the use of tobacco and opiates The disturbances of function wrought by the practice of taking alcoholic beverages daily belong to our common stock of knowledge and represent generally or analogously what of nerve injury is done by toxic narcotics as a class They depress the vital tone of every organ of the body Of alcohol we know that its high diffusible quality enables it to penetrate the animal tissues in every direction, and by impairing the nutritive properties of the blood to interfere with those metabolic changes that are essential to the maintenance of the integrity and vigor of every organ, muscle, nerve gland, mucosa, lymphatic etc , all suffer deterioration from frequent contact with it We know well its ravages on stomach, kidney heart and liver, and its inhibitive effects upon the cerebral and spinal centers are matters of every day observation It may be that Hyrtl more than merely accentuated his impressions from laboratory examination when he said that he could easily detect the brain of a drunkard in the dark because of its comparative hardness but we certainly should expect a similar effect upon the nerve mass whether it were placed in alcohol to soak, or the latter instilled by daily installments The impairment of the functional energy is so reflected in the character and conduct of the habitué that we are irresistibly led to the conclusion that the disturbances of the nervous centers are those with which the higher psychical faculties of mind are directly concerned These no longer exert their normal control in the intellectual and moral expression, and weakness of will and instability of judgment advance *pari passu* with the alcoholic invasion

It is not claimed that alcohol has a *specific* effect upon certain brain parts, and attacks them on opportunity, but that by perversion of the nutritive supply it as an early effect lowers the functional tone of the brain, and these may introduce a train of evil consequences to motor and psychic action The senses, which at first may be exalted through inhibition of vaso-motor control, become later obtunded, the intellectual perception relatively declines, and with this power to reflect and to appreciate nice distinctions is lost The sentiments of courtesy, refinement and kindness, esteem of virtuous character, independence and manly resolve become less and less exhibited, until quite replaced by indifference to the commonest usages and requirements of propriety and duty The character assumes more and more a pathologic form We have the exhibition finally of a mental lesion, as insanity, whose physical concomitants of perverted function offer material for an easy diagnosis The alcoholic invasion especially affects the higher organic centers of the brain, those that correlate moral apperception, because of their more delicate adjustment to the economy of nutrition and sympathetic impression Then, too, their comparative remoteness from the arterial centers may be another reason for their disturbance Grief, disappointment, chagrin, poverty, may be alleged as cause for a large proportion of society's inebriates, but the fact remains that eight-tenths of the intemperate drinking that abounds is begun in the home or the friendly circle by indulgence of the appetite in ways imprudent or vicious As Dr Bushnell once said The scale and order of simplicity once broken, then ensues a distempered or distemperate life that runs more certainly to that which is intemperate

The cocain, opium and other drug habits of our day may run a shorter course than that of the alcoholic but their perverting effects are not more certain or disastrous A similarly associated impairment of the physical and mental organisms is the outcome, a similar change of function, from capacity to incapacity, from strength to impotence from probity to dishonesty, from nobility to vileness from humanity to bestiality These are pathomental artefacts of an uncontrolled self-indulgence Now that we have the *dictum* of the French pathologists at command to supplement our own observations, we know that the habit of smoking operates to produce changes in the blood and the tissues through cardiac irritation and gastric derangement, changes that in time necessarily lower the general vital tone, and affect unhappily the economy of mind The pessimism and dyspepsia of Carlyle were correlative What of his inveterate pipe smoking and his almost equally inveterate indulgence in stomach-trying diet? How the fine cells of that powerful brain must have suffered from the scanty nutritive supply that a vitiated blood stream brought to them! We can easily imagine that the blood of the author of that story of the French Revolution so luridly picturesque in its narration of horror must have bristled in the microscope with its billions of crenated corpuscles The eccentric vision of the historian and the distempered conduct of the man as husband and acquaintance furnish a homily for the moralist, and a fertile study for the neurologist

The successful treatment of the chronic habitué involves as a primary object the readjustment of the factors of his thought life, so that his motives for right and orderly living shall be renewed and his will inspired with energy and persistence But we shall fail to restore coherence and harmony in his psychic relations if we do not in the outset attend to the rebuilding of his body, awakening to fresh activity the organic functions, so that the nervous correlates of mind—cell and fiber—shall be supplied with the elements essential to their reinvestment, and this reinvestment should go on in advance of psychic reformation in order that the intelligence of the man shall be conscious of a growing strength The older the habit the more difficult its management, yet it is the age of the habitué that has more to do with the determination of curability Who, however, will say that the degenerative changes in a given case have gone so far that no improvement is possible? Those whose experience warrants an expression of judgment are inclined to take encouraging views of the effect of considerate treatment The President of this section, after years of critical observation, has said "The tendency in nature being toward the maintenance of the perfect type, we may look for an endowment of new normal tissue where all the conditions are favorable, and under such circumstances a cure, or what is popularly called reformation, takes place"

Each case must be studied by itself, the type of constitution being understood, the stage of degeneration may be approximated, and a forecast of the probable outcome of systematic treatment be ventured

DISCUSSION ON PAPERS OF DRS DRAKE AND DRAYTON

Dr Charles H Hughes—The first paper seems to take a rather peculiar position The term mental disease, as applied to insanity, and as a synonym for insanity, has been understood by alienists and psychiatrists in all countries to be a conventional term Science has assumed that mind is the aggregate of the personality and individuality of the person, as discerned through the several functions of the brain and cerebro spinal axis It has never entered into the metaphysical question as to what is mind Nor has it attempted to fathom the nature of the cell Psychologic science has relegated the question of the nature and essence of mind to the unknowable The Cartesian philosophers maintained that the mind resided in the whole and in every part of the organism, that it represented the individuality of the person and was the psychic portraiture of his personality Science has to do with material things, its instrumentalities of research are material, and the organs which it examines with the microscope, the test tube or the crucible are material Science says that the brain is the organ of mind, adopting that term and accepting it from the psychologists The somatic psychologists study the physiology of the brain in regard to the manifestations of what philosophy has called mind Now, we have never attempted to maintain that the material entity of the psychologists could become diseased, because if it become diseased it might also die, and we know the dilemma in which we might be placed Science has judiciously evaded this question, and left it to the domain of pure psychology No sound psychiatrist, no correct alienist, who is careful of what he says, will go upon the witness stand or the rostrum and maintain that the mind can become diseased

We do not think that the brain centers preside exclusively over the material metabolism of the organism While science has reached the point at which it believes that conditions in the gray cortex have much to do with the normal metabolism of the organism, it has not reached the point at which it can say that they all reside there, for we know that acephalous beings have the power of physiologic metabolism in their ganglionic processes, that hearts are formed, livers developed, kidneys evolved, etc, without the intervention of the higher psychic centers of the cerebrum While, in the main, the object of the paper would meet with the concurrence of most men who have made this a life long study, still I think it has somewhat trespassed beyond the domain of science

Dr Burr—It seems unnecessary for us to go into matters in connection with the soul, the spirit

The subject of autointoxication I consider of great importance to those who are treating insane conditions I find myself confronted with difficulties in the way of medicating those cases ordinarily They have symptoms which I would like to meet by medicine directed to the condition, but the objection of the patient is very difficult to counteract

As I have always understood the term hypochondriasis, it signifies a willful lack of interest in one's self, and I am satisfied that in the majority of cases of hypochondriasis there is at the bottom a pathologic condition, and often this condition of autointoxication, owing to trouble with the kidneys, the intestine, malassimilation and faulty metabolism

Dr Sanger Brown—The great trouble in neurology has been that we have been wanting in sufficient distinct and clear data with which to work, and I think the conception of the neuron as it has been promulgated by students in various countries in the last year or two—due mainly to the great improvements that have been made in the process of staining, and studying the primary unity of the nerves—has gone a great way toward giving the remarks which we have before made, and which have been hypotheses, an actual definite meaning

I simply wish to refer to the published results of Dr Berkeley's recent investigations in Johns Hopkins University, which were set forth some months ago in *The Brain* This only covers one department of this subject, but it is a very important one and one which I think ought to be emphasized, because it shows that it is possible we may look forward to a time when the various poisons, the auto infections, etc, can be definitely reducible to a distinct anatomic basis, indeed, that it may be possible, perhaps, to reduce insanity to this anatomic basis

Heretofore we had been forced to say that there were gross changes in alcoholism in the brain There might be sclerosis in alcoholism or there might not, I do not think it is possible to demonstrate that If two brains were laid down before us, one of the worst drunkard in the world, and one of a man who had never tasted a drop, I do not think it would be possible to differentiate between them Dr Berkeley took a large number of rabbits and fed them with all the alcohol they would stand for seven or eight months, until many of them died of convulsions He found no process of hardening on examining their brains but he did find changes in the body of the neuron —not changes in the axis cylinder This was not the result of the staining process, because he made numerous control experiments I think this indicates the direction in which we should look, because when we are studying neurology we are only studying the function of the neurons, and everything indicates that they may be regarded as so many units, and we can study the symptoms exhibited from that standpoint

Dr J T **Searcy**—I refer in my paper to changes by toxins in the neuron, a change in the shape and size of the body, this becoming shrunken, and the processes of the neuron being altered at their extremities

The changes in the axis cylinders of peripheral nerves are also noted in some conditions like the neuritis of alcohol and peripheral neuritis The whole subject is still in the beginning of its growth

Dr **Drake**—One of the strictures on my paper seems to be as to my claim that the functional activity of the centers of metabolism was dependent upon the tissues in the brain This I wish to explain, as I include in the brain everything in the cranial cavity The ganglionic centers I consider to be centers which receive their energy from these higher centers If they receive no reinforcement of energy, then the metabolism ceases, but so long as they are connected by nerve fibers with the higher centers then the process continues Cut the connection and the process continues for awhile, but as soon as the energy which is already contained in those lower centers is exhausted the metabolism ceases The heart can pulsate out of the body for awhile by virtue of the energy which is contained in its own ganglion centers As soon as that energy is expended, it ceases to beat

Dr **Kleinschmidt**, of Washington, D C – Hodges has shown very clearly the great influence exerted upon the central nerve cells by excitation of its axis cylinder process, the changes being shown in altered conditions of form, etc Again, it has been shown, over and over again, by Weigert especially, that normal excitation, if repeated through the cells of the nerve centers, have their influence upon the morphology and undoubtedly also upon the chemistry and molecular structure of the central nerve cells So that, considering the central nerve cell as the center of energy, we may readily suppose that influence such as cited by the gentleman from New York will have a very decided impression upon the central nerve cell He held that by a proper mode of educating the brain that had been reduced by disease or intoxication or bad habits, we were able to reproduce by proliferation new central nerve cells I do not believe that that process has as yet been clearly demonstrated I do not believe that the central nerve cell, and especially the higher differentiated nerve cell of the cerebral cortex, under any conditions can increase and multiply by proliferation But there is another way in which we may educate that central mechanism Taking the studies of the neuron we find that the nerve cell itself adds to its connections and the capacity of the nerve cell is entirely to be measured by the number of connections it can make with other nerve cells, bringing it into nearer connection with the center of the system in which it may be In this case proper education may lead to a new combination, to increase in the protoplasm processes by which new combinations are brought about, and in that way we gain a greater result We can not suppose that all nerve cells are equally affected and all the nerve cells in a single cortex are probably not occupied at one time Now, if we can increase the metabolism in a nerve cell to such an extent that these processes shall form into wider connections, we therefore improve that nerve cell I do not think that a cerebral cell once formed can proliferate

Dr **Charles H Hughes**—I only know of one man who ever maintained that the cerebral cortex cells could be reproduced, and that was John P Gray, of Utica The peripheral nervous system can reproduce the central nervous system I do not think in regard to the question of degeneration, that toxicity is the sole cause of mental aberration in those cases in which insanity appears I think that we are not yet prepared by any of the later researches to explode the doctrine that insanity is the product of more than one generation, that a morbid aptitude of the cell, or the neuron as we shall have to say now, and we shall have to speak of neurons, neurils, and epi neurils, in order to be in accord with the progress of modern histologic research—is one of the factors I do not think that insanity, as a rule, is primarily developed by any form of acute toxicity It is excited by it, but it resides originally in the morbid aptitude of the psychic center or cell envelope

I do not believe, however, in the degeneration of the race, that the psychic sense of the average human being is less capable of sustaining pressure, on the contrary, I believe that they are standing more than the same centers in our ancestors and that the tendency of nature is to preserve the type

> "So careful of the type she seems,
> So careless of the single germ"

Individuals fall by the wayside, unable to carry the burdens laid upon them, and failing to learn wisdom early in life

It is the pathologic condition of the center of the cell soil that gives rise to the morbid manifestation Given a certain influence that acts upon the psychic centers of one individual and his cerebrum sustains it without morbid result One individual takes alchohol in his blood, and displays no delirium, another takes opium, and displays no delirium, while the third becomes crazy drunk or markedly insane under the influence of either It is the pathologic condition of the cell that displays the aptitude of degeneracy of habit, and it is the morbid tendency which is the exciting cause

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SARCOMA OF THE CHOROID, A SERIES OF CASES

Delivered before the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY GEORGE F FISKE, M D

CHICAGO

Case 1 —M E B , architect, age 50, presented himself April 3, 1888, complaining of a cloud in the right eye which followed a severe attack of "catarrhal fever" three weeks before

O D 36 in Sph , 42 in Cyl , 90 deg 5 5 Sz
O D 48 in Sph , 18 in Cyl , 90 deg 5 6 Sz

In the left eye there were several choroidal plaques in the upper outer periphery, and floating opacities in the vitreous In the right eye separation of the retina on middle nasal side extending within 2 mm of the papilla Nothing to distinguish it from ordinary separation of the retina No suspicion of tumor

Patient gave a history of very close application and was in a highly nervous state Consultation was had with two other specialists with no thought of sarcoma Patient stopped work for two weeks, protected the eyes from light, wore a bandage and remained in bed quite constantly, with no change He then resumed his work to a certain extent, contrary to advice and did not return to the writer until June 18 when vision was reduced to perception of light, anterior chamber shallow tension plus, pain and cyclitis Diagnosis of sarcoma was made and immediate evisceration of the orbit advised Patient preferred to go to Europe, where eye was enucleated in Berlin the middle of July and proved to be a melano sarcoma patient dying within six months, result of metastases in the liver no recurrence at seat of operation

Case 2 —Mr G A , plumber, aged 40, consulted me Oct 9 1890 having noticed for five weeks that sight in the right eye was imperfect

O D 0 75 D Cyl 90 deg 5 8 Sz
O S 0 75 D Cyl 90 deg 5 5 Sz

Examination of the right eye with the ophthalmoscope revealed a small separation of the retina on nasal side showing the retina pushed forward by a small body apparently 1 mm in diameter, extending diagonally over the papilla, not quite to its center Diagnosis was made of sarcoma of choroid and immediate enucleation advised

Patient did nothing for nearly two weeks and then consulted three eminent colleagues, all of whom pronounced the separation as probably not due to a tumor, though one proposed a needle operation for purpose of diagnosis, which was refused This means that the separation had extended greatly during the two weeks, as there was no question as to the diagnosis October 9 January 19 patient again consulted a colleague, presenting iridocyclitis and a glaucomatous condition Enucleation was performed Feb 1, 1891, and a choroidal tumor of 5 mm in diameter found, of uniformly black color, composed of small spindle cells without reticulum and numerous large pigment cells Later, patient came again under my observation and remained there for six months There was no recurrence in the orbit of the sarcoma, but the patient began gradually to fail, six months after the operation, went away for his health and died within eighteen months of "liver trouble" No post mortem

Case 3 —Mrs M presented herself Sept 16, 1893, with a history of poor vision in right eye for several months Vision equals fingers in the outer field at two feet Separation of the retina involving all but the outer upper and inner upper portion of the retina Optic nerve not visible No tension and no iritis or cyclitis Media clear and the retina apparently pushed forward by a large, dark, rounded mass growing from the outer central portion of the choroid

Diagnosis Melano sarcoma, and I enucleated September 20 The tumor was round 7 mm in diameter, not extending to the papilla, composed of spindle cells, round granular and pigment cells Optic nerve showed no infiltration nor did specimens from the connective tissue of the orbit Jan 1, 1896, there had been no recurrence, patient in normal condition

Case 4 —Mr E C, merchant, aged 56, came Nov 6, 1893, with a history of poor vision in right eye since May 1893 Old corneal scar from blow with a marble at ten years of age Counts fingers at five feet Separation of the retina nearly complete, except in upper inner quadrant Ophthalmoscope reveals a mass reaching nearly to the iris in front growing from the outer upper portion of the field, covered by the retina still showing the retinal vessels Enucleation advised, with diagnosis of sarcoma of choroid I operated Nov 17, 1893, and found tumor of 4 mm diameter, having its origin 6 mm from the papilla Tumor had a very small base, was a spindle celled sarcoma with some pigment Patient's condition Jan 20, 1896, good, health excellent, with no sign of recurrence

Case 5 —Mr C K, business man, age about 48, consulted me November 28 1893, with the request that I give him a pair of glasses

O D —1 D Cyl, 160 deg 5 6 Sz Partly
O S —0 50 D Cyl, 160 deg 5 5

The day was rather dark and vision so good that it was only a fixed habit which led me to examine the fundus, when I was greatly surprised to find a small tumor on nasal side near the macula, with retina pushed forward and adherent to the tumor, no separation of the retina extending away from the base of the tumor

Diagnosis Sarcoma The patient lost a brother from carcinoma of the tongue Patient went to Brooklyn for operation at the hands of a friend who is a specialist and the eye was enucleated Dec 5, 1893

The following is the report of the pathologist at the New York Hospital "The tumor is almost spherical in shape It originated in the loose connective tissue of the suprachoroidal space and involved the entire choroidal layer and external layer of retina, pigment layer, rods and cones, mebrana limitans externa and extended a short distance on either side in the external molecular layer of the retina, the other layers of the retina are pushed before the tumor and can be recognized as a thin membrane everywhere limiting the tumor in front Posteriorly it is limited by the sclerotic, which at the point of contact with the tumor is only one half the normal thickness The tumor is 7 mm in diameter It is estimated that the center of the tumor is 5 mm from the physiologic excavation It is composed of spindle cells of medium size, spindle celled sarcoma, with a minimum amount of basement substance The vascular supply is quite abundant There are pigment granules through out, but it can not be regarded as a melanotic sarcoma Along the course of one or two of the vessels in the sclerotic coat are numerous round and spindle form cells, but can not be identified as sarcomatous elements The optic nerve, dural sheath and external sheath show no evidence of tumor tissue"

Feb 29, 1896, patient's health perfect, no sign of recurrence

There are in addition to the above five cases, of which I have been able to give more or less complete histories two cases in my record books which I have not been able to report, one where the diagnosis was quite certain and whose history I hope to give later, and another where it is a question as to whether there is a tumor under the separation of the retina or not

Of the above five cases two died, one certainly and the other probably as a result of a recurrence of the sarcoma in other parts of the body Both cases where death ensued were rapid in progress and had reached the stage of glaucoma and involvement of the ciliary body

The report is presented for the purpose of a discussion as to the practical questions which present themselves

1 The question of early diagnosis between the separation of the retina and the separation of the retina which is caused by a tumor behind it

2 The question as to whether enucleation shall be advised in cases where the diagnosis is not certain

3 The importance and duty of assisting one another by giving to each patient, in all cases of doubt, i e, in almost all cases of ablatio retinæ, full notes and sketches for use when patients consult other specialists, which is usually the case

First, as to diagnosis This is often easy when the tumor can be seen, or where glaucomatous symptoms or inflammations of the ciliary body, have presented themselves, also where the separation follows extreme myopia, or a blow, or injury, or seasickness Where the separation is slight and occurs in the upper half of the field, the tendency of the sub-retinal fluid to seek the lowest level will often assist the diagnosis, and in some cases drawing off the fluid with a hollow needle and syringe will clear up the doubt even though the separation is not cured by that means

The importance of early diagnosis is greatly increased by the fact that these choroidal sarcomas almost always occur as primary and not as metastatic sarcomas I have not found in the literature a single case of a sarcoma or melano-sarcoma occurring as a metastasis following sarcoma in some other portion of the body On the other hand, particularly in the case of melano sarcoma, metastases in other parts of the body following the sarcoma in the eye-ball are very frequent and fatal

Second, as to indications for an operation in cases of doubt, I would suggest enucleation be advised where *a*, the vision is irrevocably destroyed and there is doubt as to the presence of a tumor, *b*, where, though there is slight vision present, it is failing rapidly through extension of the separation, and there are no previous examinations by colleagues, excluding the presence of a tumor, with no good reason for excluding it from the history of the case, *c*, where glaucomatous symptoms show themselves or cyclitis or irido-cyclitis

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DERMOID TUMORS OF THE CORNEA

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY ALBERT RUFUS BAKER, M D
Professor of Diseases of the Eye, Ear and Throat in the Cleveland College of Physicians and Surgeons Medical Department of the Ohio Wesleyan University Cleveland Ohio

Although a number of cases of dermoid tumors of the cornea have been reported from time to time it has seemed to me that a brief report of the only two cases that have come under my observation might be of sufficient interest to claim your attention

Case 1 —July 1880, Mr M G , aged 24, a peculiar growth from the cornea of left eye, protruding between the lids, present since birth, pedunculated, occupying the entire palpebral opening, measuring about one inch in length by one half inch in breath, and rather thickly studded with stiff black hair Being pressed together by the eyelids, the tumor presented upon superficial inspection the appearance of a small hair brush instead of an eye The eyeball was entirely concealed by the growth, but by opening the lids widely and pushing it downward some clear cornea could be seen, and fingers counted Patient declined operation at that time but returned in 1884 He thought the tumor was growing larger but it seemed to me about the same size as when first seen An anesthetic was given and the tumor removed without difficulty It was found to be attached to a little more than half of the cornea at its lower and outer portion, but peeled off smoothly, leaving a transparent cornea beneath

It extended close up to the sclero corneal margin but did not encroach much, if any, upon the conjunctiva, with which it seemed to be intimately connected The portion of the cornea occupied by the tumor became somewhat cloudy for a few days but soon cleared up excepting a small line running in a semicircle across the cornea, marking the point of attachment, vision fairly good , is able to read ordinary book print

Case 2 —July 15, 1893, Miss A P , aged 17, three small flat dermoid tumors of cornea of left eye Two of them were on the outer sclero corneal margin and each about one third the diameter of the cornea , the other a small one consisting of a fine line extending perpendicularly across the pupillary area almost at the center of the cornea The three tumors were all separated by clear cornea They had the appearance of ordinary integument with a slightly pinkish tinge Present since birth and no increase in size Patient was seen by Dr C R Agnew in 1877 It seems to me that I have seen a report of the case by Dr Agnew, but I have been unable to find it in the literature at my command Under a general anesthetic I dissected off the tumors Was very glad I gave a general anesthetic at the urgent solicitation of the patient because of the free hemorrhage which would have embarrassed me very much with cocain alone The case made an uneventful recovery, but with much more opacity of the cornea than I had hoped, judging from my experience with the other case There was a high degree of hypermetropic astigmatism and with full correction vision was only brought up to 20 200 S

Ryba[1] in 1853 collected twenty-seven cases that had been reported up to that time in human eyes, three in oxen's and four in dogs' eyes Mr Dixon reported a case of dermoid tumor the size of a hazel nut upon the lower part of the cornea and sclerotic of a little girl The tumor was removed and found to be white smooth and hard The cornea after removal was transparent but in three or four days became white and opaque

Cases have been reported by Graefe,[3] Virchow,[4] Arlt, Taleferro,[6] Hulke,[7] Wells,[8] Labrum,[9] Cooper,[10] Strawbridge,[11] Risley,[12] Roberts,[13] Fuchs,[14] Brose,[15] and others

Ammon[16] reports a case of coloboma of eyelids in which a dermoid tumor of the cornea filled the gap

Mr Swanzy[17] gives detail of a case he observed under the care of Von Graefe The tumor was very large and was removed by Graefe It occupied the whole of the depth of the cornea The anterior chamber was opened and considerable vitreous escaped

Milvalsky[18] (Prague) reports two cases of dermoid tumors of the eyeball The paper is published in Cezechesh with a résumé in French The author has reviewed the literature on the subject very carefully and has found recorded seventy-five cases of dermoid tumors of the eye-ball Seven of these he calls atypical, being connected with the eyelids Five of the cases were entirely corneal, and twelve were situated on the sclerotic and fifty-one were placed partly on the sclerotic

"The relation of these tumors to the conjunctiva varied In some the conjunctiva seemed to be replaced by the tumor tissue in others it [illegible] surface of the latter, while in most instances a portion of the growth was apparently covered by conjunctiva, while the remainder exhibited on the surface a pavement epithelium, papilla, hair follicles and fine hair The cystic form or closed dermoid is never met with in the eye "

A review of the preceding cases seem to show that they are all congenital, a few may be located on the cornea alone, a few on the sclerotic but the largest number involved both structures and are found most frequently at the outer and lower sclero corneal margin

Van Dusyse's[19] ingenious theory as to the origin of these tumors is not generally accepted, namely that the amnion was at one time united and through constriction and separation, there remained at the original point of contact amniotic cells from which later the dermoid cysts developed " A more reasonable explanation is the one generally accepted as to the etiology of dermoid growths in other parts of the body, *i e* an inversion of the epiblast during embryonic existence, an islet deposit of cells, which makes skin, sebaceous glands and hair follicle

Little need be said as to treatment Removal for cosmetic purposes is usually desirable Notwithstanding Von Graefe's unfortunate experience the danger of penetrating the eyeball is slight It does not seem to me that cauterizing the wound as recommended by most writers is necessary, and may only add to the amount of opacity present upon recovery The same objection is true with regard to the advisability of covering the surface of cornea exposed with conjunctiva, recommended by some writers

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DISCUSSION

Dr Adelaide E Portman, Washington—From the situation it can be readily understood why it is so serious in removal as it involves the whole depth of the cornea and the sclerotic, removal causing results to visual acuteness Hirschberg reports a case, in a girl of 17, of enormous size in which the result was vision of normal acuteness

Dr J A White, Richmond—I reported a case of dermoid growth of the cornea in a man some years ago The growth was so large as to prevent closure of the lids, the cornea being entirely covered and the sight in consequence abolished It had begun at the corneal margin some ten years previously and gradually overspread the cornea in which by pressure it had produced ulceration, followed by cicatricial adhesions over one third of its surface Its removal was followed by favorable healing, the cornea cleared and subsequently the eyesight became nearly normal [illegible] as not [illegible] but was shown by the micr[illegible]

[illegible] S [illegible] open [illegible] rarity of dermoid growths of the cornea Any growth of this kind which invades the sclerotica must make any attempt at complete removal fatal to vision by the inevitable cyclitis which ensues A comparatively large growth located entirely in the cornea may be safely removed In the case of a man who lost the fellow eye, I removed a large dermoid tumor of the cornea, closing the wound by the Lembert suture, with the result of restoring such useful vision as enabled the man to go about alone If the sutures penetrate the whole thickness of the cornea the openings through which the sutures pass will continuously drain away the aqueous humor, keeping the sutures so long in contact with the surface of the iris as to lead to its fatal inflammation

WATER

BY I N LOVE, M D

ST LOUIS, MO

In searching for the striking and unusual we often overlook that which is trite and commonplace to our detriment Nowhere is this more true than in the practice of medicine I believe that we are, safe not only as teachers in medicine but among ourselves, in laying stress upon the importance of using the simplest possible means for gaining a given end The neophyte is not the only one who seeks for the unusual, for the formidable, as a means to an end and overlooks that which is near his hand Indeed all of us are prone to err in the same direction As a profession we need to call a halt, ever and anon to get down off of our stepladder in our search for the unattainable, to come down to terra firma and use the things that nature has given us Drugs, drugs, drugs, seem to be the chief inspiration in the life work of too many medical men, and in these modern days we must have a care in our use of animal therapy, for we know not as yet but what this form of medicine is quite as dangerous, if not more so, than the articles belonging to the mineral and vegetable kingdom, the drugs of which Oliver Wendell Holmes very truly said, "That the world at large would be better if they were all thrown into the sea," but the fishes would more than likely cease to be, as a result of the dumping

Water, which is everywhere near at hand, ready for use, is one of the most important remedial measures we can bring into play The hydropaths, who for long were looked upon as fanatics, have done humanity and the medical profession a service, in that they have demonstrated the great value of water However, the fanatic in the use of one remedy oftentimes is in danger of denying his patient remedies of value that would work in harmony with his special hobby Surely, when we recall the fact that more than 75 per cent of the whole make-up of the human body (including every tissue of the same) is water, we can appreciate its importance It has been demonstrated, time out of mind, that while water fulfills many other subsidiary offices, it is essential for the occurrence of molecular change, or mobility—the essence of the manifestations of life In the absence of water a state of molecular rest (which means the absence of activity) prevails

It goes without saying, that water in some shape or other, is one of the essential conditions of life and just as essential as solid matter, it not only entering into a constitution of every part of the body, but is required for various purposes in the performance of the operations of life Without it there could be no circulation or mobility of any kind ' It forms the liquid element of the secretions through the medium of dissolving and enabling the digested food to pass into the system and the effete products to pass out, a constant ingress and egress are occuring, and the former requires to stand in proper adjustment to the latter The demands for water are effected by the amount of muscular exercise and the degree of temperature to which the individual is exposed, as in both conditions the loss through the skin as well as through the lungs is greatly increased " It has been a popular impression for long that the drinking of water with the meals interferes with digestion in diluting the gastric juice, and as a result of this notion, the public have largely refrained from drinking water with their meals Pavey well says that it is a mistaken notion to think that when we drink with a meal we are diluting the gastric juice The act of secretion is excited by the arrival of the meal into the stomach, and the gastric juice is not there at the time of ingestion It happens indeed that the absorption of fluid takes place with great activity and the liquid drunk during the meal (unless the quantity be very great) becoming absorbed may be looked upon as proving advantageous by afterward contributing to yield the gastric juice which is required

For an irritable stomach or an attack of so-called bilious colic, nothing is superior to liberal quantities of hot water as pure as possible The first amount administered may be rejected, but if so, it accomplishes the washing out of the stomach If the drinking be persisted in, a large quantity will be retained and finally a relaxation of the pyloric orifice of the stomach will occur, and the water will pass freely into the smaller bowel, relaxing and stimulating secretion as it goes The intense pain of these attacks can often be promptly relieved and if helped by the addition of hot water applied over the stomach and bowels, through the medium of cloths saturated with the same, and occasionally sprinkled with small quantities of turpentine, which acts as a counter irritant In the majority of cases the stereotyped administration of morphin by injection, is uncalled for Indeed we are safe in saying that in the bulk of the attacks of acute indigestion and intense pain resulting therefrom, we had better relieve the condition in the simple manner suggested, rather than apply remedies which deaden pain, check secretion and retard convalescence, and frequently mask the preliminary symptoms of a dangerous disease Nothing will more promptly relieve a patient's suffering from the after-effects of a banquet or midnight dinner, where the victim has possibly tarried with and looked too long upon the wine which is red (and white wine too for that matter) resulting in the dark brown taste and that terribly different feeling in the morning, than the imbibition of large quantities of hot water The instruction to drink one or two pints of extremely hot pure water, prior to rising and sandwiching in between the various glasses a cup of black coffee, without cream or sugar, will give us a good result The hot water washes out the stomach from above downward, stimulates the activity of the excretory glands, soothes and tranquilizes the nervous system, which is thoroughly on edge, and the black coffee administered in the manner suggested, meets the necessities of the hungering and the exhausted nerve centers, serves as a disinfectant for the alimentary

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Read at the meeting of the Mississippi Valley Medical Association St Paul, Minn, Sept 16 1896 canal and encourages diuresis The injuction to abstain from food for several hours will as a rule make our patient all right and in good shape for a hearty mid-day meal

While it is true that water does not in itself undergo any chemic alteration and hence is not susceptible of liberating force, does not in other words, constitute a force-producing agent, yet it contributes to chemic change by supplying a necessary condition for its occurrence in other bodies In other words the proper metabolism of tissues, the entire scheme of nutrition, depends upon water Not only do we need water then for the proper accomplishment of nutrition and as an element of food, but we need it for eliminating purposes Pavey has stated that it may be reckoned that we receive from about fifteen to twenty-five ounces of fluid into the system mixed with solid food that is consumed and, besides this, it is advisable that about sixty to seventy ounces and even in some cases as much more should be taken The average amount of urine passed daily may be said to be fifty ounces and there is considerable loss of fluid through the skin and lungs To meet this waste by elimination, compensation must be affected by a corresponding amount of liquid, as long as the fluid taken is devoid of noxious properties a free supply must be regarded as beneficial, forming as it does, a means of carrying off impurities from the system Pavey further says he believes that the benefit derivable from a course of water treatment is often in a great measure due to this cause Water then, taken in free quantities acts as a purifier of the system, flushing as it were the *animated system* of sewerage, dissolving out poisonous materials and waste products of the body, which otherwise might be accumulated For instance it is well known that uric acid, a very important factor in gouty conditions, requires a large amount of water to render it sufficiently soluble to be carried out of the system For fully fifteen years I have been impressed with the thought that the majority of people, sick and well drink an insufficiency of water I would advise the establishment of the water drinking habit on the part of children from the beginning, through life And as each year passes, I have been more and more convinced of the correctness of this position It is the universal observation that thin people are scant water drinkers and a change of habit in this regard often results in an improvement quite manifest Then again we will observe that the fat and well-fed looking ones are uniformly liberal water drinkers We have then in this, evidence of the fact that a free supply of water improves nutrition Furthermore, the one who does not drink water, often has a dark, swarthy, so called bilious complexion, inactivity of secretion, manifested in the appearance of the face whereas the water drinker has a clear, healthy complexion, suggestive of the fact that secretion is active and that the poisons due to waste are not retained and stored up in the system We can not impress too forcibly upon the young and particularly the female devotees of society, that the greatest improver of the complexion which they can have, is the free use of water internally and externally Surely if the general conditions of those who are supposedly well are improved, it follows that those attacked by disease in any form, will be the better for the free use of water When medicine is administered, it should be accompanied or followed by as large a quantity of water as may be retained by the patient Prompt solution, absorption, action and elimination of the medicine will be the result

For years, in the management of my typhoid fever patients, as well as most other diseases, I have insisted upon the drinking of a liberal quantity of water, endorsing by my practice the course of Debove, who administers almost to the exclusion of all drugs in typhoid fever from four to eight ounces of cold water, every two or three hours when awake, to wash out the poisons from the system The free secretion which follows its use, comforts the patient in every way and undoubtedly serves as a reducer of temperature This internal use of water accompanied by its proper external application almost excludes medicine from the field, though it has been my custom for years not less than ten, to use infinitesimal doses of the mild chlorid, eucalyptol, menthol and oil of gaultheria, for a gentle stimulant to excretion and local antisepsis for the alimentary canal, preferring always to have the bowels gently open with a view to eliminating all poisonous matters rather than a constipated or tied-up condition of the alimentary canal, with a consequent retention of poisons In this connection permit me to say, as I have repeatedly said in debate, that the views and treatment of my friend, Dr Woodbridge of Ohio, are in no way new, nor are they original They are simply the application of the accepted antiseptic and gentle eliminating treatment of typhoid fever I will grant that the extravagant manner of his presentation of the subject has resulted in a more general dissemination of the advantages of this treatment, but this is more than offset by the absurd position taken by him in stating that under this treatment he allows a complete recklessness in the matter of food and exercise I know Dr Woodbridge is honest, but I know furthermore as well as I know anything, that he is mistaken in his conception of typhoid fever, and many of his cases reported as such, have never been made acquainted in the remotest way with Eberth's bacillus, the causative factor

It is well known that there is no solvent which will remove poisonous materials, such as uric acid (the exciting cause of gout) and many other poisons from the system, so readily and completely as absolutely pure water Indeed, the temperature-reducing and gland-stimulating affect of copious water drinking has been utilized for many years, and more recently by Meigs, Cantani, Dujardin-Beaumetz, Debove and Sahli

Cantani is a great believer in the reduction of temperature slowly but surely by the regular drinking of large quantities of water Indeed, he believes in the liberal introduction of it into the alimentary canal from both directions

Dujardin-Beaumetz, no better authority in the world, promotes diuresis, or elimination or washing out of the products of organic disintegration (or waste) in disease by copious drinking of water

Debove administers, almost to the exclusion of all drugs, in typhoid fever, six ounces of cold water every two hours to wash out the poisons from the system

Simon Baruch of New York one of the highest authorities upon hydrotherapy and value of water enjoined as a remedial agent endorses the use of water by those whose names have just been cited, and even goes further

Every authority will sustain the t t the purer the water, the more complete the elimination and more satisfactory the result in every way

Let it be remembered that to Dr James Curry of Liverpool belongs the credit of first using the cold water treatment in a systematic way in fevers He employed as a rule cold effusions frequently and occasionally cold baths His method was adopted by many physicians and soon came into extensive use both in England and on the Continent in the treatment of many febrile affections and especially in the management of typhus, typhoid and scarlet fever It gradually fell into neglect, like many other excellent therapeutic medicines, and was for a long time almost forgotten Dr Ernest Brand of Stettin revived the cold water treatment of fevers in 1868 and the method came rapidly into use in Germany, Austria and Switzerland This history of the application of cold water bears out the thought that in these modern times, that many measures which have their seeming origin in Germany are more readily accepted and popularized than if coming from other directions There are many objections that can be presented to the extreme application of cold baths, as was the rule with Brand, the modification of Ziemssen being much to be preferred Ziemssen recommended the introduction of the patient into water having a temperature of ninety-five degrees, then cold water to be gradually reduced to seventy-five degrees Fahrenheit, or even below This method is much less apt to produce shock, and the pleasantness of the procedure is such as to render it much more acceptable to the patient and attendants To secure the same reduction of temperature to the patient a longer time is necessary for the bath The placing of a sensitive or nervous patient into an ice cold bath skirts the border line of the brutal and is to be condemned, except in rare cases This method is certainly to be condemned in the fevers of children Sponging of the surfaces with cold or tepid water in which a little alcohol or aromatic vinegar has been placed is often very comforting and soothing to the patient It does not reduce the temperature to any very remarkable degree but has a cleansing effect on the skin and stimulates its activity, and is for that reason oftentimes a great advantage

I am convinced that experience in the application of water in the treatment of fevers will endorse many of the conclusions of Brand, Ziemssen, Hare, Vouveret, Winternitz, Dujardin-Beaumetz, Vogl, Peabody, Austin Flint, Simon Baruch, to the effect that it is not only valuable as a reducer of temperature but as a stimulant and a helper in the direction of elimination and a tranquilizer and securer of rest and an aider in the digestive and assimilative processes essential to repair He who had ever seen a patient almost unmanageable with the delirium of high fever or the convulsions of childhood dependent upon fever, promptly relieved by a cool bath followed by restful sleep, can not require further argument Indeed, I believe that no one in the profession would deny that the utility of water used judiciously in this way, has been absolutely proven

The hot bath as applied to children suddenly taken with convulsions is often misapplied When we recall the fact that convulsions are more frequently produced by high temperature than any other cause, we can readily see the objection to extremely hot water baths Before being used the temperature should always be reduced and if it be used, the bath should be comfortably warm and cold water gradually added However, the hot water bath in many conditions in childhood is of great service in the treatment of those who are sick, particularly in its cleansing effect upon the skin, rendering the excretory appendages of the skin more active It serves admirably as a tranquilizer, producing restful sleep when applied immediately before retiring, to victims who are sufferers from insomnia and restlessness

We all know the value of hot water when applied locally to inflammations Recalling the parboiled, shriveled, whitened look of the washwoman, whose hands remain in hot water long, we can readily understand that the hot water drives the blood from the inflamed tissues and gives great relief to the pain, as well as removing the trouble permanently Racking headaches can often be relieved magically, as any lover of the luxury of a graceful barber and a comfortable barber's chair can testify, by the application of towels rung out in boiling water and laid across the forehead, eyes and part of the head which seems to be most affected Apparent suffocation and complete stenosis accompanying diphtheria and acute laryngitis is often relieved very satisfactorily by a liberal application for a few hours of cloths wrung out of hot water to the external parts

Liberal poulticing with soft cloths saturated with almost boiling water are cleaner and in every way to be preferred to flaxseed, bread and milk poultices, and other filthy abominations

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THE TREATMENT OF DIPHTHERIA

BY DOWLING BENJAMIN, M D

CAMDEN N J

To thread one's way through the enormous and conflicting mass of statistics that have been published in regard to the treatment of diphtheria by means of antitoxin, or serum therapy, is an undertaking to appall the stoutest heart

By patience and application we may observe a few facts, however, standing prominently and seemingly substantial enough to remain as useful monuments to guide us through the wilderness of uncertainties to some safe vantage ground

THE RESULTS IN PRIVATE PRACTICE

A study of the results of the antitoxin treatment in private practice presents much greater difficulties, for obvious reasons, than does the study of the same subject in institutional practice

Exactly what the results have been can not be ascertained, as it is not possible to obtain the personal and private statistics of each individual physician as to its results and his death rate, nor would it be wise, since such results might do injustice to thoroughly competent men If results are particularly good, however, occasionally an individual practitioner will publish such, which seems to be the only way we can obtain them

The limits of this paper would not permit the quoting of each of the publications by private practitioners, giving the results of their individual practice The introduction of a few, however, will be necessary In the present enormous amount of literature and reports on the subject, the results obtained by any one man in private practice can have but little effect on the question

One year ago, Dr Rosenthal of Philadelphia, in a paper read at the meeting of the Medical Society of the State of Pennsylvania, arrived at the following conclusions: "Antitoxin is a specific for diphtheria. In early cases, those seen one or two days after infection, no death rate should be recorded. In laryngeal diphtheria, the so-called membraneous croup, antitoxin is especially indicated. It should be used in every stage and at any date of the disease, no matter how late we see the case. Its influence can be proven, for cases of laryngeal diphtheria perish from suffocation long before any toxic symptoms can be manifested." For that reason he strongly urges the necessity of prompt intubation when indicated, even if before the injection of antitoxin.

Regarding the use of antitoxin, he says: "Do not delay or hesitate in this disease because the case is not so bad, or because it might get well without, but use it at once; the earlier it is used, the more certain its success."

This and similar sentiments from other sources, and the very logical character of the theory of antitoxin treatment, based as it was on laboratory experiences, necessarily made an impression upon thinking physicians, and Dr. Rosenthal was not alone in this radical and sweeping position. It represented pretty fairly the sentiments of the writers on antitoxin during the winter of 1894-5.

Three days ago I wrote to a leading antitoxin firm to send me the latest data in favor of antitoxin, as I wished to use it in a paper.

This recent literature received consisted of a reprint from the *Atlantic Medical Weekly* for March 21, 1896. In this paper Dr. Rosenthal says, in speaking of the number of cases treated with antitoxin: "I have treated seventy-eight cases of diphtheria with but two deaths."

It is important to state, however, that Dr. Rosenthal has found that mercury is equally as good a specific for diphtheria as antitoxin, according to the *Medical and Surgical Reporter* of June 13, 1896, for at the Philadelphia County Society's stated meeting May 27, 1896: "Dr. Rosenthal said that *before* the advent of the antitoxin he had *always* considered mercury a *specific* for diphtheria. As early as 1885 he had given calomel in diphtheria but in rather larger doses than had Dr. Flick."

In laryngeal diphtheria he has given as high as five grains every hour—in fact, he has given as high as 120 grains to a child five years old, in twenty-four hours, nor did he notice that the child showed any of the physiologic action of the calomel. He was led to believe that to ptyalise a child who suffered from diphtheria was an impossibility, and he not only gave such large doses of calomel to these children, but he has used at the same time corrosive sublimate in enormous quantities, having introduced 1-500 solutions into the child's nostrils, and swabbing out the fauces with it, probably introducing into the body of the child about a grain of corrosive sublimate, inside of twenty-four hours.

If the doctor had deaths occur under the above treatment I believe he would have said so, as it was a vital point at the time, just as important as to state the death rate under antitoxin, and if he has treated seventy-two cases since the advent of antitoxin, he must have treated a great many more before, with as good or better results, or we will have to leave his evidence out altogether.

Dr. S. S. Haldeman, of Portsmouth, Ohio, in a paper read before the Ohio Medical Society, on May 28, 1896, says:

"I have had an experience of eight months in the treatment of diphtheria with antitoxin, embracing the administration of the remedy to seventy cases of the disease, several of them bacteriologically examined, and all presenting the usual well marked signs and symptoms of the disease, and occurring during an epidemic of a severe type, characterized by a high rate of mortality where the antitoxin was not employed in the treatment, without losing a case treated."

He used it for the purpose of immunizing in twenty-seven cases that had been exposed to the disease, with the desired result of preventing it in all but three cases. In these, the disease began before the end of the third day after immunization.

He also stated: "That in a child five years old he had used the antitoxin for the prevention of the disease, the child being perfectly well. The child died in four minutes. Other children injected at the same time were not injured by the antitoxin." He says: "As to the cause of the fatal result, it is not clear to my mind." He said further: "The wide adoption of antitoxin as a remedy in diphtheria enables one to draw some useful conclusions as to its value. Yet I speak with some caution and reserve, with my limited experience of the remedy, and the results in my own practice have led me to wonder if it were really the treatment with antitoxin, or the non-employment of remedies, such as chlorate of potassium internally, and the local irritants to the diseased parts, that had something to do with the uniform and rapid recovery of my cases."

"Usually in conjunction with the injection of antitoxin, I would give calomel freely, and a prescription combining a few drops of tincture of ferric chlorid in glycerin and syrup, to be given hourly." "After exfoliation of the membrane and the subsidence of fever, I would give small doses of quinin and strychnia every four hours, to a child one year old, and order this continued for not less than three or four weeks. Of the various local applications administered, I think most of that of Professor Loeffler. For a young child I have diluted the solution with alcohol and water, and directed that the mouth be swabbed out with this preparation, but in the case of older children and adults would advise the use of the solution in full strength. The preparation consists of menthol, 2½ drams dissolved in 9 drams of toluol, one dram liq. ferri chlorid, and alcohol, 2 ounces."

He used local disinfectants to prevent or limit the growth of bacteria in the throat and supporting treatment. He had but one case with laryngo-stenosis.

Query: Which one or two of the above remedies cured the disease?

It is well to remember that Professor Loeffler cured seventy-one consecutive cases of genuine diphtheria in 1894 with the same remedies that Dr. Haldeman used (except the antitoxin), during an epidemic, the general mortality of which was 25 per cent. (See Loeffler's report at the 8th International Congress of Hygiene and Demogrophy held at Budapest, Sept. 1894.)

THE USE OF ANTITOXIN IN GENERAL PRACTICE IN CAMDEN.

Since the introduction of antitoxin, July 5, 1894 (it is claimed by Dr. Robinson) it has not been very extensively used in Camden. As far as [illegible] can [illegible] number of cases in which [illegible] you exceed one hundred, and by quite a number of physicians

Last May Dr McAllister reported, in private practice, ten cases with two deaths, or 20 per cent, and at West Jersey Orphanage, nineteen cases with no deaths

Dr O W Bramer has had thirty cases of diphtheria treated with tincture chlorid of iron internally, and local antiseptic sprays of creolin without a death He tried antitoxin in three cases, no worse than some of the others, with one death, a mortality of 33 per cent

One means of ascertaining the results of the new treatment outside of hospitals, that we can use at present, is to take the general returns of the disease from all sources of private practice, ascertain the mortality and compare with an equal number of cases returned by private practitioners, not using antitoxin, and ascertain the death rate In this method, however, there are two sources of error One is the difficulty in knowing to what extent the antitoxin has been in general use, and in ascertaining whether the two sets of cases were in all respects sufficiently similar as to the prevailing type of the disease and their environment All the official returns available, however, are composed of both private and institutional practice, no attempt being made by the boards of health to keep separate lists

The results of treatment in 10,240 cases of diphtheria in the German hospitals and in private practice were recently reported to the Society for Internal Medicine by Professor Ulenburg Of this number 5,790 were treated with the antitoxin serum, with 552 deaths, a mortality of 9 5 per cent for all ages, 4,450 were treated by other methods with 652 deaths, a mortality of 14 7 per cent

The German government is interested in the sale of antitoxin, and most of these statistics are prepared by government officials It should be noted that most all the literature on the subject is being furnished to the profession by manufacturers and importers of antitoxin and I am sorry to find they sometimes leave out unfavorable reports, as I have ample proof

It is worthy of note that foreign statistics, especially the institutional, are so different from ours in their results that there can hardly be any comparison For instance, the high mortality averaging from 50 to 75 per cent claimed by European hospitals to have been their rate previous to the antitoxin treatment, is something an American practitioner can not understand Either Europe must be a very unhealthy place, or the professional skill is not equal to the American Their standard text-books have never made such statements of mortality

The most decided and brilliant test of antitoxin, and the most favorable so far, seems to have been the one reported by Dr Otto Katz of results obtained in the Kaiser und Kaiserin Friedrich Kinder-Krankenhaus of Berlin with Schering's antitoxin, in a paper read before the Berlin Medical Society, June 27, 1894 From January 1, until March 14, 1894, the date when the new treatment was begun, there were in 86 cases, 38 deaths, a mortality of 41 8 per cent

From March 14 to June 20, 128 diphtheritic children were treated with antitoxin, with 17 deaths In every case Löffler bacillus was demonstrated by means of blood serum culture Now, if we add to this 13 per cent the six moribund cases that were received at the hospital at the same time, it would give us a mortality of 19 21 per cent, as against 41 8 The above are the celebrated "brutal figures" which converted Professor Virchow

The other treatment has remained the same that it was before the injection method was introduced Local applications, sprays and salves were used as before Tracheotomy or intubation was done for the same indications When the antitoxin ran out in July in this institution the mortality rose to its usual high average and fell again on the renewal of the antitoxin treatment, *but the average of deaths* per year in proportion to population *is no less* than it was before the advent of antitoxin, though the remedy is said to be in pretty general use in Berlin

To return to the United States In Boston, during the year 1895, antitoxin period, 588 deaths occurred, or 11 for every 10,000 inhabitants For fourteen years preceding the antitoxin treatment the average mortality per 10,000 of population was 9 In New York, antitoxin treatment 1894-95, 3,993, or 10 deaths for every 10,000 inhabitants During the fourteen years preceding the antitoxin treatment the deaths averaged each year 10 per every 10,000 inhabitants, which is about the same as it was after the introduction of antitoxin The same is true of Brooklyn There were 1,139 deaths from diphtheria in Brooklyn during 1895, or 10 for every 10,000 inhabitants In 1890, before the antitoxin treatment, there were 902 deaths which is 10 per every 10,000 inhabitants These statistics are from official returns of the health department

In Camden, N J (from official records)

Year	Cases	Died	Death rate Per cent	Rate per 10,000 inhabitants
1893	285	66	23	16 60
1894	314	61	16	10 10
1895	168	29	18	4 50 (antitoxin)
1896, to June 15	117	20	18	6 40

HOSPITALS

In the Boston, New York and Philadelphia Municipal Hospitals, antitoxin has been applied thoroughly for a year It would be fair to presume that more light cases were sent to the hospitals since the advent of antitoxin than before, as physicians have improved greatly in the last two years in their habit of sending to the health officers notice of their cases They more fully appreciate the importance of the matter, and health authorities have more vigorously enforced the ordinances The returns have improved in Camden since the board of health proceeded against several physicians, and such is the case in all the large and progressive cities

In Berlin, after two doctors were arrested and punished the returns doubled For a generation the law has been, that all deaths must be returned before burial, but for various well known reasons many cases were not reported, unless likely to die or malignant

BOSTON CITY HOSPITAL

Year	Cases	Deaths	Per cent	
1892	387	185	47 80	
1893	419	203	48 44	
1894	598	266	44 48	
1895	1,566	207	13 21	(antitoxin)

WILLARD PARKER HOSPITAL, NEW YORK

1888	258	60	23 25
1889	383	79	20 62
1890	292	67	22 94
1891	289	85	29 41
1892	295	79	26 77
1893	343	108	31 41

Year	Cases	Deaths	Per cent	
1894	699	205	29 32	(antitoxin thoroughly used)
1895	778	190	24 42	"
1896 to May 1	251	58	23 10	"

The death rate at the Willard Parker Hospital was lower in 1889 and 1890 without antitoxin than it was under the antitoxin treatment carefully applied for over a year

I have visited New York for the purpose of investigating the subject I find Dr Winters of the Willard Parker Hospital has carefully investigated and verifies these statements His impression is that 38 per cent mortality would fairly represent the actual mortality of Willard Parker Hospital at the present time under serum therapy, if patients who have clinic evidence of diphtheria were subjected to this treatment to the exclusion and elimination of those cases which have no clinic data to warrant the diagnosis of diphtheria This was the percentage found by Dr Ewing in such cases in that hospital In laryngeal cases the mortality is 70 per cent in this hospital, while in Geneva it is 49 without antitoxin In the University College Hospital, London, it was 47 per cent without antitoxin In Philadelphia Municipal it is 52 per cent

I have anxiously awaited the criticisms by Dr J W Brannen of the Willard Parker Hospital in regard to the statements and figures given by Dr Joseph P Winters (already quoted by me) before the New York Academy of Medicine May 21, 1896 and I expected that he would be able to show many important defects in Dr Winter's statistics, but I really find that while he deprecates the unfortunate position in which Dr Winter places the hospital and discusses some of the subordinate issues and even goes so far as Japan for testimony, that he makes no perceptible impression whatever upon the elaborate paper of Dr Winters, whose figures seem like the Rock of Gibraltar to stand firm and unscathed after the assault The plain fact remains that the antitoxin treatment has not lowered the death rate, at least in that institution Nor was *early* treatment by antitoxin better than *early* treatment by other antiseptic practice

MUNICIPAL HOSPITAL, PHILADELPHIA

Results for 1895 were as follows Treated with antitoxin 302, deaths 85, rate 28 14 per cent , treated without antitoxin 404, deaths 105, rate 25 99 per cent , of the 302 antitoxin cases 51 were intubated, with 27 deaths, 52 94 per cent , of the 404 non-antitoxin cases 71 were intubated, with 40 deaths, 56 33 per cent , in favor of antitoxin 3 39 per cent , of the antitoxin cases 16 88 per cent were intubated, of the non-antitoxin cases 17 57 per cent were intubated, in nearly all the cases peroxid of hydrogen was used as a spray locally, in the 404 non-antitoxin cases tinct ferri chlor and hyd bichlor were used internally in the 302 antitoxin cases tinct ferri chlor was used The death rate was therefore higher with antitoxin

LONDON HOSPITALS

In the Northwestern and Southwestern Hospitals 1892, 1893, 1894, cases 4,672, deaths 1,187, per cent 25 4, in all the hospitals, 1895 (antitoxin) cases 2,182, deaths, 615, per cent 28 1

What is embodied in the foregoing in regard to antitoxin as a therapeutic agent must arouse in thinking minds a number of reflections No subject since the earliest dawn of medical science has been so thoroughly and extensively investigated in so short a time as has the use of antitoxin in diphtheria This is gratifying, for it shows that the science of medicine has emerged from its puerile stage and is advancing to maturity and accuracy By the enthusiastic and universal application of this method by the profession throughout the world we can settle in one year a question that would have taken 100 years by the slow progress of a few generations ago Electric transmission of intelligence and statistics have shortened periods of investigation at least 99 per cent

The results of treatment without antitoxin in the United States seems to be better than in Europe The results with antitoxin in this country have not been nearly so favorable as have those reported from Europe The fact is, is that nearly all the instances where antitoxin has been used it has not been relied upon exclusively, but other treatments of the most important and powerful character have been used at the same time

It is worthy of remark that in all cases where good results have been obtained, antiseptics or disinfectants have been applied to the throat and mucous membrane With all the mass of accumulated facts, experiences and figures, we will have to wait another year before the question of the value of antitoxin can be fairly and conclusively settled

To discuss the value of antitoxin as an immunizer would require an amount of space, statistics and time which would make this paper too long Suffice it to say on this subject, from what I can gather from a fair and impartial investigation of the subject it appears that antitoxin does immunize in the majority of cases, but not longer than about thirty days

It does not destroy the bacilli of diphtheria at all They seem to remain in the throat the usual length of time, a constant source of danger to other persons, unless local antiseptics be used Antitoxin is not an antiseptic, you can cultivate the bacilli in it

A number of cases are on record where antitoxin has been injected as an immunizer, or to cure patients, and has caused their death These are not sufficiently numerous, however, to forbid its use, provided its claims as a curative agent can be established, as the deaths occasionally occurring from the use of ether are not a sufficient argument to lay it aside as an anesthetic, and there is good reason to believe that carbolic acid or some other foreign substance in the antitoxin has been the cause of these accidents Nor is there a decided difference in sequelæ

The theory of the antitoxin treatment appears to be perfect and the treatment seems satisfactory in the laboratory, I have always been a student of the microbe pathology and I still have high hopes of the success of antitoxin, but as Professor Virchow has stated, 'Every consideration and theory must give way to the mere brute force of figures ' and there does not appear to be quite enough figures as yet

We are no doubt so familiar with the early statistics which came from abroad, inducing the extensive trial of antitoxin in this country, statistics of a very favorable character, during *the latter part of 1894 and the* early part of 1895, that I have naturally not encumbered this paper with them, as after a year s trial, the latest results are the only figures of real interest and importance, and they do not seem so favorable as we would have wished for I do not wish to be classed as a partisan in this matter I am simply an earnest seeker after truth trying to find [illegible] remedy

I have great confidence in the results obtained at the Municipal Hospital in Philadelphia, owing to my personal knowledge of the carefulness of Dr Welch, the physician in charge I have been using the streptococcus antitoxin in cases that have been brought into the Cooper Hospital with puerperal septicemia but am not yet ready to report on the results

THE ANTISEPTIC TREATMENT OF DIPHTHERIA

Nothing could be of more practical value in the science of medicine than results obtained by a physician in general practice and ripe experience upon a common disease, after fifteen or twenty years of careful practice and close observation, I wish to lay before you a presentation of what I consider the antiseptic method of treatment as applied to diphtheria

In 1877 in my graduating thesis at the University of Pennsylvania (which received honorable mention from that institution) I wrote as follows

"The evidence that disease may be caused by germs, or at least in some instances, amounts to demonstration, and it should be recollected that low organisms split up their nutrient matter, or pabulum, into new compounds, which in many instances have a powerful effect upon the human system, and may disturb their functions as long as they are generated within it When we view the practice of medicine and surgery with reference to this subject, we find that all those meteorologic, all those hygienic conditions, all those medical and surgical appliances and means which are most antagonistic to the form, growth and development of living germs and low forms of life, have been the most effective in the treatment of ontagia, even before the laws of germ development nd their relation to disease were so well understood s at present, practically (owing to the accuracy of clinical observations) contagia were treated in many instances as if their true nature had been known

"Quarantines were established and disinfectants quite intelligently used, but now, guided by a better knowledge and understanding of the nature of zymotic disease we are able to lay down a foundation of broad principles upon which to erect the superstructure of a more perfect practice "

Since that time pathogenic germs or bacilli have been so universally admitted by the profession to be the cause of the zymotic diseases that it can no longer be a debatable point in pathology

You can not have diphtheria without the presence of this microbe Like all other vegetables, and especially the low forms of life, it is necessarily subject to variations in the character and amount of its poisoning products, for the bacillus after all is not the real poison which causes such disastrous consequences in the human system, but the ptomain which it produces

Various staphylococci and micrococci found in connection with this germ in diphtheritic cases no doubt produce some of the lesions found in the neighborhood of the diphtheritic points, especially the secondary affections

IMMUNITY

It is claimed by good authorities that an attack of diphtheria does immunize a patient My own experience is that I have never known two well-marked attacks of severe diphtheria in the same person I have seen two cases followed in a year or two by a lighter attack

The literature on the subject would cause me to think that some must have had a different experience

THE MEMBRANE

Formation of the membrane —The formation of the membrane is not well understood It appears to be an exudation of fibrin from the capillary blood vessels, under a high state of irritation and congestion, in the same manner as it is produced by any other irritation or congestion, and may be seen sometimes thinner and sometimes thicker in stumps that are left open to "glaze," in peritonitis, croup, etc Now the question arises, as to the nature of those peculiarly malignant cases of diphtheria that show intense intoxication, and even die before any visible membrane is formed It seems quite probable that large surfaces of the pharynx and nasal cavity have been covered by the bacillus in very active and virulent form before the false membranes are seen, so that sufficient toxin has been absorbed into a susceptible system to produce fatal symptoms before the exudation has had time to form

Pseudo-membranous croup —I believe this to be an entirely different and distinct disease, clinically and etiologically While the Löffler bacillus is always found at some stage of true diphtheria, it is not found in croup, except as a rare and accidental visitor The microscopic and clinical pictures of these two diseases are totally distinct Croup usually begins at the larynx, little or no fever, usually progressive and fatal, simply by a mechanical stenosis of the larynx, occasionally extending into the bronchi, seldom visible in the pharynx, and without the Löffler bacillus Diphtheria on the other hand, usually begins with fever, symptoms of intoxication and one of the first things seen on examination is the exuded patch in the throat, often tinged a little yellow No doubt many cases of true diphtheria were formerly treated as cases of croup, or have been returned as such after death I do not believe that croup is a contagious disease Never but once in nineteen years have I seen two or three children with croup at the same time in one family

At present I am inclined to believe that membranous croup is not due to any bacillus, but to severe local congestion or a disturbed circulation, caused by exposure of parts of the body to cold and dampness

Follicular tonsillitis is sometimes mistaken for diphtheria, it differs clinically and microscopically, and I think we are rapidly approaching a period when it will be demanded of the entire profession to make use of the microscope in differentiating these closely allied throat diseases, and I believe that the Board of Health has done a good thing in ordering all cases of supposed croup to be reported to the Board in less than twenty-four hours

LOCAL QUARANTINE IN DIPHTHERIA

My experience has been that it is easy to quarantine a case of diphtheria in a room where there is a large family and many children, successfully preventing extension of the disease to the other inmates, as I do not think that the germs spread more than a few feet in the air at a time, but may be rapidly disseminated by contact or fomites But, in two instances where I had successfully quarantined a case in the house from the rest of the family, in about a year afterward a number of the family were taken with the disease, not having been exposed elsewhere, so that we were driven to the conclusion that quilts or something that was in the room during the previous sickness had not been properly sterilized, and the germs had been animated after this long period

This leads me to a very important reflection in regard to quarantine in a city, namely, if the case of diphtheria in a house was properly quarantined, why could not the family be permitted to go to their work, pursue their usual avocation, and not be submitted to the objectionable fate of being compelled to remain in that house during the disease, and, since the disease is more likely to be carried, after the general quarantine has been removed from the house, by the inmates for months or years, is it not equally safe with proper room quarantine to allow the inmates egress and ingress during the existence of the case in the house?

Since the authorities do not thoroughly and persistently quarantine a house usually during all epidemics, the inmates of the house go out and the neighbors intermingle, it might be more practicable and agreeable to a community for a board of health to quarantine a portion of the house This procedure has many things in its favor

How is the bread winner to pay his rent, when he has a family? How can he pay the doctor?

Under proper conditions he could see his child's face at evening if he is anxious to do so without carrying the disease

Intubation vs tracheotomy—I have performed both intubation and tracheotomy in a number of cases (I always prefer intubation) and I have had recoveries take place with intubation under conditions which I believe would have proven fatal had tracheotomy been performed however, we have tracheotomy to fall back on in case intubation fails

LOCAL TREATMENT

The symptoms are usually not very pronounced before the diphtheritic "patches" are visible I make the bacteriologic or culture test in all cases when possible From the foregoing statements it may be seen that I hold that this disease is essentially local and external, for anything on the mucous membrane practically is not in the system, but the products of the bacillus being absorbed into the system as fast as produced, cause the general and constitutional symptoms

Basing our treatment upon the views above stated, I have for over 15 years held, that the rational procedure, in combating this disease was simply to destroy the bacilli where they are located on the mucous membrane of the throat or elsewhere, by the proper applications of antiseptics or germicides and secondly, meeting the poison in the blood by such therapeutic means as physiologically and chemically were the best antidotes for it

Now, while many scientific and learned physicians have followed these lines in treating diphtheria, they have so frequently been disappointed in their results and struggled along with a high mortality (in many cases, 30 to 40 per cent), yet I have always contended that this is the correct line of treatment, and will give the best results if accurately and thoroughly carried out

The important consideration, therefore, is what local and general medication to use and equally important, the method of applying and using these remedies, for I believe that the failure to cure by this practice will be due either to a want of proper applications of the treatment, or to the fact that it has been commenced too late in the disease

If you will refresh your knowledge of anatomy by examining the drawings of the interior of the nose pharynx and larynx you will conclude that no treatment applied by the ordinary swab or probang, could

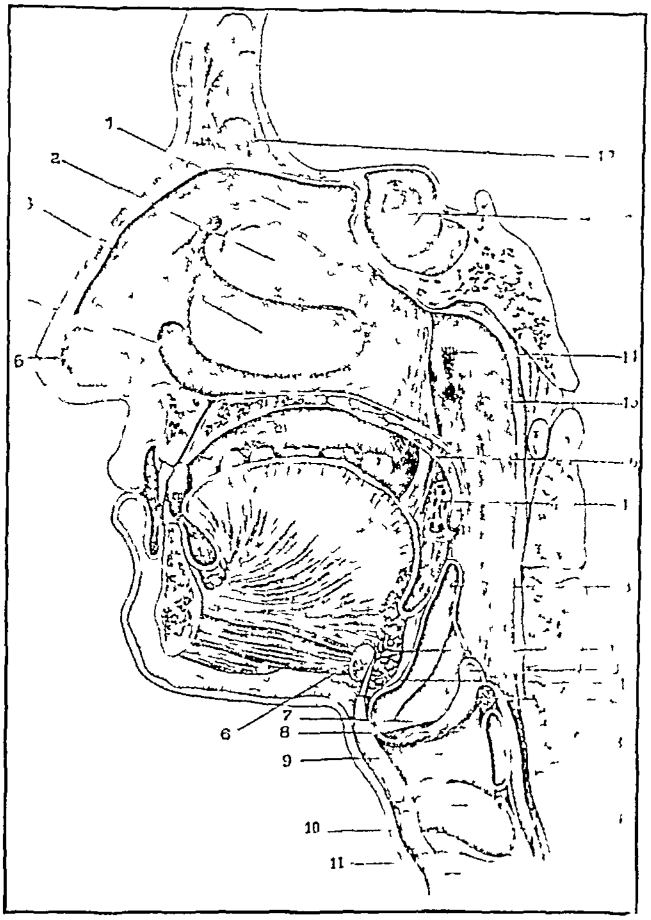

FIGURE 1—VERTICAL SECTION OF HEAD SLIGHTLY DIAGRAMMATIC

1 Superior turbinated bone 2 Middle turbinated bone 3 Lower turbinated bone 4 Floor of nasal cavity 5 Vestibule 6 Section of hyoid bone 7 Ventricular band 8 Vocal cord 9 and 23 Section of thyroid cartilage 10 and 21 Section of cricoid cartilage 11 Section of the tracheal ring 12 Frontal sinus 13 Sphenoidal cells 14 Pharyngeal opening of Eustachian tube 15 Rosenmuller's groove 16 Velum palati 17 Tonsil 18 Epiglottis 19 Adipose tissue behind tongue 20 Arytenoid cartilage 21 Tubercle of epiglottis 22 Section of arytenoid muscle

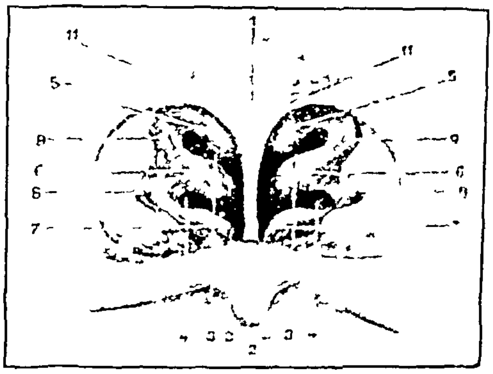

FIGURE 2—RHINOSCOPIC IMAGE

1 Vomer or nasal septum 2 Floor of nose Superior meatus 4 Middle meatus Superior turbinated bone 6 Middle turbinated bone 7 Inferior turbinated bone 8 Pharyngeal orifice of Eustachian tube 9 Upper portion of Rosenmüller's groove 11 Glandular tissue at the anterior portion of vault of pharynx 12 Posterior surface of velum

by any possibility reach the disease at its most dangerous points, and consequently must be very inefficient in nasal and laryngeal cases Even the physician could not apply the treatment thoroughly in an adult, and the idea of applying it in a struggling child is preposterous Moreover, since the treatment has to be applied every hour at least, it must be left to the family to be carried out It is therefore utterly impracticable, and I have found where it has been tried it did not accomplish the results There would be a considerable mortality

Antiseptics applied by the nasal douche, after Thudicum's method, do reach the nasal cavity thoroughly, but it is so difficult to accomplish that it can not be employed with children in private practice to any great extent, even if the physician superintends its use

Gargles are of little or no use in the nasal and laryngeal cases

The spray or atomizer therefore remains the only feasible method of applying antiseptics to all parts of the affected mucous membrane To the recognition of this fact, and its early and thorough adoption together with an efficient and pleasant antiseptic remedy to be used in the atomizer I must attribute largely my success in the treatment of this disease

I acknowledge that it is with the profoundest diffidence and respect for the criticisms of my medical brethren that I advance the following statement

For over ten years, including 100 cases, I have not had a death from diphtheria, unless a case that died about twelve years ago be included, connected with this were three other physicians and I have never been convinced that it was not a case of membranous croup A white membrane was very distinct in the larynx, extending downward I early practiced the antiseptic treatment and would not be justified in experimenting with other things, unless my results change, but I never use the bichlorid of mercury, nor do I think it should be used in this disease, because its action though beneficial is almost wholly due to its local effect upon the bacilli in the throat Many cases, especially in young children, have been injured by the too free use of this substance Other antiseptics, such as carbolic acid, salicylic acid, sesquichlorid of iron, are equally efficacious and may be used in ample quantity without the same amount of danger to the person

Since we usually depend on the laity any treatment that can be properly and thoroughly applied, even to young children, must have vast advantages over any other In severe cases I have all the mucous membrane thoroughly sprayed through the nose and mouth at intervals of fifteen or twenty minutes, or even longer, about fifteen seconds at a time, the child breathing as naturally as possible during the application The spray comes in contact with every part The membranes and symptoms rapidly disappear On several occasions I have suspended local treatment after their disappearance, and in twenty four or forty-eight hours the membrane would again spread over the throat, a few bacilli having been left alive, disappearing again promptly on resuming the local treatment, thus demonstrating its efficacy It is necessary to see that the atomizer works properly and that the attendant applies it thoroughly

Professor Loeffler claims that the disease being entirely due to germs lying in the throat, consequently in a position where they could be reached by local antiseptics, could be readily cured by local application, and instances seventy-one cases of diphtheria treated exclusively by local antiseptic applications, without a single death, in his private practice This statement was entirely consonant with my experience and practice, instituted ten years before his great discovery of the germ

If it be true (and I do not think that it can be successfully disputed now, that diphtheria is due to the presence of germs in the pharynx), why would not germicides destroy them? For we know that we possess a number of antiseptic or germicidal medicines that are invariably fatal to germs and can be used in quantities sufficient for that purpose without any detriment to the patient Holding the view of the disease that I have advanced, I could never understand why a local treatment would not be all that was required

Proffessor Loeffler, after various experiments, suggested a combination of

Menthol cryst	10 gm.
Toluol q s ad fac	36 c c
Alcohol absolute	60 c c
Liquor ferri sesquichloridi	4 c c

I have found the the formula of Professor Loeffler to be disagreeable to the patient, while the one I use has not that objection and is quite as efficient

Acid acet dilut	fl.ʒii
Pot chlorat	ʒss
Acid carbol	gtt i
Tinct ferri chloridi	gtt v
Pulv Alumen	gr v
Acid salicylic	gr i
Glycerin	fl ʒss
Aqua ros	fl.℥ss
Aqua q s ad	fl.℥iv

Misce Sig Use as directed

It is a clear, permanent liquid of a purple color

In making application to the throat of diphtheritic patients the doctor or nurse may use a disc of glass held between his face and the patient, to prevent infection from the sudden coughing and spitting of the patient

I always give tincture ferri chloridi in large and frequent doses, and I believe it produces favorable conditions of the blood, as it does in many other cases of septicemia, notably erysipelas, which often disappears under this treatment alone

One of the benefits derived from this remedy is its local action while being swallowed

Result under the local antiseptic treatment Benjamin, 100 cases, 100 recoveries, Loeffler, 71 cases, 71 recoveries

I will not weary you with a repetition of illustrative cases I hope the profession will give this treatment a fair trial and report on it

CASES IN POINT

I was called to attend a girl, 10 years old, whose brother, the only son, had died of the disease the day before The patient had diphtheria in a very grave form, pulse 140, temperature 104, respiration 40, and the throat covered with a thick membrane She was placed under treatment Marked improvement took place in twenty four hours At the next visit, the patch of membrane had diminished in size, the pulse was 120, the respiration 25 She was well in eight days, running about the house

In another part of the town I was called where five children had the disease, as well as mother and her baby, about six months old Three children across the street had just died and were awaiting burial Others in the neighborhood had the disease All these cases rapidly recovered I might go on until it would become monotonous, relating cases of which I have records My former assistant, Dr W I Kelchner, reports seventy-five consecutive cases by this treatment during the past three years, without a death

The more malignant the case the more brilliant the results that I have obtained by this treatment When I seek an explanation of this phenomenon it seemed quite natural that it should be so, for the abruptness and urgency of the onset of the disease causes the patient to send for medical assistance promptly, and the severe symptoms being due to the large number of germs spread over the mucous membrane of the pharynx and throat, the local antiseptic treatment is effective before sufficient time has elapsed to protect themselves by a false membrane

This was illustrated in the case of a woman who was taken with the most malignant symptoms, after having just buried her three children who died with the disease on that day She was practically well in forty-eight hours after treatment began, and attended to her household duties on the fifth day

If it be true that we can save our patients by local antiseptic treatment, properly applied early, the local treatment will displace the antitoxin treatment in general practice Patients can go about with less danger of spreading the disease when convalescing, since their throats are sterilized and no bacilli can be found by culture tests

Microscopic and culture tests should be made before using the treatment, as generally the bacilli disappears after using the antiseptic remedy

215 Cooper Street

THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration held at Atlanta, Ga May 1896

BY EUGENE FOSTER M D

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(*Continued from page 811*)

PROPOSITION 7

In some communities and even nations a greater number of vaccinated and unvaccinated persons are attacked with small pox Anti vaccinationists parade such instances and use such data to bolster up their ridiculous assertions that such facts show the utter futility of vaccination Without a single exception every such effort is based upon the most shameful perversion of facts

Let us take Great Britain to illustrate this proposition It is true that in the epidemic of smallpox, 1871-72, a greater number of vaccinated died than those unvaccinated But does this fact prove the failure of vaccination ? By no means Why? The vaccinated portion of the population number thirty to forty times that of the unvaccinated In 1872 there were 300,000 of children under 5 years of age in Great Britain (Sir Lyon Playfair, *loc cit*) These were divisible into two classes, vaccinated and unvaccinated The vaccinated were thirty to forty times more numerous than the unvaccinated Now for results of vaccination In the vastly more numerous class—the vaccinated—the smallpox deaths numbered 1,780, while among the fractional portion of the population—the unvaccinated—the deaths number 413 According to Dr Playfair the mortality from smallpox was from 120 to 160 greater among the unvaccinated than the vaccinated The Registrar General of Great Britain showed that taking the whole community of the kingdom, there was only one death among the vaccinated for every forty among the unvaccinated

Let us take the epidemic of smallpox in London in 1882 During that year 2,317 deaths were registered from smallpox[3] (vide Registrar General's Annual Summary for 1882) Of these, 524 were stated to have been vaccinated and 962 unvaccinated, while regarding the condition of others as to vaccination, no statement was made It is tolerably certain that among the population of London not more than 10 per cent are unvaccinated, and if 10 per cent be supposed to be doubtfully vaccinated there will remain 80 (this estimate is certainly well within the true proportion) per cent presenting clear evidence of vaccination If, then the vaccinated and unvaccinated had been equally liable to fatal smallpox, the former would have died at the same rate as the latter, and since 962 of the unvaccinated died there would have died 7,696 among the vaccinated But the actual number of deaths among the vaccinated was 524, hence it is clear that the vaccinated and unvaccinated were not equally liable to death from smallpox

Moreover, if the mortality among children be considered the difference between vaccinated and the unvaccinated appears still more striking The deaths from smallpox during 1881 included 27 of vaccinated children under the age of 5 and 368 of unvaccinated children under that age If unvaccinated and vaccinated children would have died at the same rate as the unvaccinated, *i e* (taking the proportion of vaccinated and unvaccinated as previously stated) the deaths among the vaccinated children under 5 would have been 2,944 But the actual number was 27, and it is therefore obvious that unvaccinated children are liable to fatal smallpox to an enormously greater extent than vaccinated children , or, in other words, vaccinated children are to a larger extent protected from fatal smallpox

Dr Seaton, in Annual Report of the Local Government *Board of Great Britain, 1874, says on this subject*

But if the actual number of smallpox deaths in persons above puberty who had been vaccinated were equal to, or even exceeded that which occurred in persons who had not been vaccinated, *it must be borne in mind* that the proportion of our adult population which is protected against smallpox by vaccination is at least *from twenty five to thirty* times as great and much more probably from fifty to sixty times or more as great as that which is *unvaccinated* The relative number of persons who now a days attain manhood or womanhood without having been vaccinated is *very small* Examination of the young men who are recruited for the army has shown for many years past that, putting aside the small percentage who are marked with smallpox, the proportion of the remainder who do not present distinct marks of having undergone vaccination aver ages for the whole of England 3 9 per cent of those examined and for London separately, 2 8 per cent As these small proportions include all doubtful cases, it is clear then that somewhat considerably more than 96 per cent of those in England or than 97 per cent of those in London only must have been vaccinated Now recruits, I apprehend are not generally drawn from that class of the population which has been the most cared for , and there is, therefore, a reasonable probability that the proportion of the whole adult population of England which is thus protected against smallpox is much larger But even if the full proportion just given, or more than that proportion, be applied to the adult population generally—4 per cent being taken as unvaccinated and 96 per cent as vaccinated—it is clear that with equal actual mortality among the two classes, the relative mortality of the former would be twenty four times that of the latter The figures, then, are conclusive that vaccination as it was practiced in this country fifteen years ago and upward, instead of failing to protect persons from fatal smallpox after they had grown up has, in the immense majority of cases, very effectually protected them

But proof of Proposition 7 does not rest alone upon statistics as to the protective influence of vaccination in children Let us inquire as to the value of vaccination upon all classes and ages of population under recent so called failures to such extent as to have shaken the confidence of some few former advocates, and supplied vaccinophobists with what they term "an arsenal full of facts testifying to the utter futility of the measure " Let us take the most widespread and fatal epidemics of smallpox which have fastened their remorseless fangs into the bodies of communities since compulsory vaccination, and see if we can compare the results of vaccination and non vaccination This is the *only rational* test Ask vaccinophobists to select their own times and places of occurrence of smallpox *for this demonstration* and they will point to the epidemic of smallpox in Great Britain from 1870 to 1873 and with pride declare that in this epidemic we have an illustration of the futility of the prophylactic powers of vaccination We accept the issue thus made, and shall demonstrate the wonderful prophylactic power of vaccination in this time (their own selection), to the satisfaction of any sane or reasonable man Of this epidemic, Dr Seaton, who was specially detailed to investigate it, says "The epidemic of smallpox which began in England toward the close of 1870 and terminated in the second quarter of 1873, was part of a general outbreak of that disease, of world wide diffusion, marked wherever it occurred by an intensity and malignancy unequaled by any previous epidemic of the disease within living memory The outbreak seems to have begun in France about a year before it manifested itself in the United Kingdom In the last quarter of 1869 it was already making considerable progress in Paris Early in 1870 it prevailed in Orleans, Bordeaux, Lyons and other large towns, and in the course of the year extended with great mortality over nearly the whole of France Except, however, in so far as it was directly conveyed by the French prisoners to various places in Germany there was very little extension beyond France till toward the close of 1870 The epidemic then manifested itself in London, in two or three of the chief towns of Holland, in Milan, at Geneva and in some other places, becoming thereafter rapidly diffused over a great part of Europe During 1871, England and Scotland, Holland, Prussia and the whole north of Germany, Italy and Spain felt the full force of the epidemic, and the first beginnings of its ravages were experienced in some of the other countries of Europe, as in Ireland and Denmark In the course of this year it spread beyond Europe to various places in Africa (where it raged along the Gold Coast), to the West Indies and to North America During 1872, while still continuing its course in most of the countries it had attacked in 1871, it made further extensions over the continent of Europe, invading Austria, Hungary, Russia and Finland, over Africa and over North America, it spread, also, to South America and the South Sea Islands, and it invaded various places of the East In 1873 the greater part of its course in Europe had been run, but there were yet, during the earlier parts of the year, various countries and districts and important capitals, as St Petersburg and Vienna, still under its full influence By the middle of 1873, however, the pandemic extension of the disease in Europe may be considered to have terminated, and smallpox generally has since then been quiescent, though there have been some considerable local outbreaks"

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[3] The Influence of Vaccination in the Prevention and Diminution of Mortality from Smallpox Presented to the Parliamentary Bill Committee of the *British Medical Association* By Dr Ernest Hart Chairman of Committee

Here, then, is, we hope, an epidemic of smallpox of wide spread prevalence and malignancy sufficient to satisfy these anti vaccinists Now for the lessons taught by this truly frightful epidemic, as applied to great Britain Seaton says "The varying intensity of different epidemics of the same disease is, indeed, a well known fact, and had been illustrated as regards smallpox, at various times, at the hospitals set apart for the treatment of that disease in London, the ordinary mortality of natural smallpox as therein observed, 35 per cent of the cases admitted having in certain epidemics been known to mount as high as 47 per cent, and that of post vaccinal smallpox to increase from 7 to 10 per cent But no experience which had been acquired in the hospital had led to the expectation that the ordinary rate of mortality to attacks would by any epidemic influence be nearly doubled Yet such was the case in 1871 and 1872, in the former of which years the deaths from the natural disease were 66 2 per cent and in the latter 77 per cent of the natural cases or in the two years combined (for the admissions in 1872 were too few to form by themselves a proper basis of comparison) 67 5 per cent of such cases This result is stated by Dr Munk and Mr Marson in their report for 1871, to have been due 'to the severity of the disease, and especially to the number of cases of malignant smallpox, the proportion of which to the other cases has been very largely in excess of anything within the experience of either of your medical officers'"

"In the hospitals of the Metropolitan Asylum district, in which the cases admitted would be of a more average character, the ratio of deaths to admissions was extraordinary, amounting to 44 80 per cent among the unvaccinated and 10 15 per cent of the vaccinated The ratio in the hospitals of provincial and foreign towns generally has ranged from 40 to 50 per cent among the unvaccinated and from 8 to 10 or 11 per cent of the vaccinated—enormous rates, and attributed everywhere to the same cause viz, the unusual proportion of malignant, black and hemorrhagic cases In several of these hospitals the rates were as high or higher than in the smallpox hospital of London as in the 'Barackem Lazareth auf dem Tempelhofer Felde,' at Berlin, which were used as additional smallpox hospitals during the epidemic in that city, and in which the mortality among the unvaccinated was 81 25 per cent and among the vaccinated 14 per cent, and in the hospital at Leipsic, in which the mortality among the unvaccinated was 71 *per cent* and among the vaccinated (including doubtful cases) between 9 and 10 per cent"

Let us now compare the mortality of this epidemic with that of other recent epidemics of the disease Here it is "In the thirty three years which at the time this *outbreak commenced* had elapsed, from the first establishment in England of a complete system of registration of the causes of death, there had been abundant illustrations of the varying fatality of smallpox epidemics, but it had been supposed by many—quite *erroneously as it now appears—that that period had been sufficient* to exhibit the limits of the fluctuations Only twice since the close of the great epidemics of 1837-41 had the smallpox deaths in England exceeded 7,000, viz, 1852, when they were 7,320, and in 1864, when they were 7,684 And though the epidemic of 1837-41, just referred to, had exhibited a mortality enormously in excess of these numbers (the deaths in 1838 alone having been 16,268), yet as this was anterior to any vaccination laws and at a time when the proportion of the population which was unprotected by vaccination was many times as great as it is now, a recurrence of any such considerable mortality as was then observed had been quite outside ordinary calculations The mortality of the 1870-73 epidemic has not indeed been by any means so great in proportion to population as was that of 1837-41, but it has approached it more nearly than had appeared possible During the 1837-41 epidemic there were registered from July 1, 1837, the termination of the epidemic in 1841, 48,012 smallpox deaths in a mean population of fifteen and one half millions, during the 1870-73 epidemic, 44,433 deaths in a mean population of nearly twenty-three millions The proportionate mortality therefore of the epidemic of 1870-73 has been less than two thirds that of 1837-41"

What of the mortality of smallpox in this epidemic of 1870 73 compared with the smallpox mortality of the last century? Dr Seaton says of it "The mortality of this epidemic was, as I have said, such as has not been known in England for thirty years, and has at least proved a complete answer, if, indeed, an answer had been required to the notion which had of late years been ventilated by some that smallpox was a disease naturally tending to extinction But, before proceeding further, it seems very important that it should be noted that the mortality of this epidemic, alarming as it has been, has not approached what was the usual annual smallpox mortality of the kingdom at the time when vaccination was unknown The annual average smallpox death rate of that period—not, be it observed, *the death rate of a particular year of special prevalence of the* disease, but the annual average death rate—was more than three fold the death rate of this, in our time, quite exceptional outbreak The estimated annual smallpox death rate of England in the last century was 3,000 per 1,000,000 of population the mean annual death rate of this epidemic was 928 per 1,00,000, having in 1871 been 1,024 and in 1872 833 per 1,000,000 The average annual smallpox death rate of the metropolis in the pre vaccin period was from 400 to 500 per 100,000 of population, the mean annual death rate of this epidemic was 148, having in 1871 been 243 and in 1872 54 And if an average be taken of the smallpox mortality of England for the whole twenty years (1854-73) during which there has been a compulsory vaccination law, a period which includes the whole of the recent epidemic, the annual death rate is found to be 245 per 1,000,000 of population, or less than a twelfth of the rate of last century"

And yet in the face of such facts as these Mr P A Taylor, M P of England, seriously asserts

"That the practice of vaccination affords no national protection from smallpox, and has had no effect whatever in preventing or diminishing smallpox epidemics That the mortality among vaccinated smallpox patients is as great as among unvaccinated"

I have no patience with a man who would seriously advance such ridiculous nonsense into the arena of scientific discussion I would as soon enter into debate with my horse as with such a man

Proposition 8

1 Vaccination performed in infancy in the best manner, confers upon the majority of these individuals absolute protection against smallpox during life

2 In not a few instances (the proportion being unknown) individuals properly vaccinated, at or or about the age of puberty partially or wholly regain that susceptibility to smallpox which vaccination had once extinguished in them

3 In the overwhelming majority of instances of individuals contracting smallpox after primary vaccination the disease is so mitigated as to be practically devoid of danger to health or life

4 The vast majority of cases of severe post vaccinal smallpox result from careless or inefficient smallpox

Inasmuch as in a considerable proportion of cases smallpox occurs a second time, and in rare instances, a third and even a fourth time in individuals, it is expecting too much of vaccination to demand that post vaccinal smallpox should not be found in a considerable portion of those who had been previously thoroughly well vaccinated

It must be confessed that the illustrious Jenner at first claimed that a successful vaccination afforded the individual absolute protection against smallpox In his work, "An Inquiry in the Causes and Effects of the Variolæ Vaccinæ," June, 1798, he says "But what renders the cowpox virus so extremely singular is that the person who has thus been affected is proven afterward secure from the infection of the smallpox"

Further experience caused Jenner to modify his views on this subject, as follows "Duly and efficiently performed vaccination will protect the constitution from subsequent attacks of smallpox as much as the disease itself will I never expected it would do more, and it will not, I believe, do less"[36]

It has long been demonstrated that the great benefactor of his race was mistaken even in his later estimate of the prophylactic powers of vaccination Primary vaccination is not and never was as fully protective against smallpox during life as a previous attack of smallpox As early as 1807 numerous cases of post-vaccinal smallpox were reported in England The Royal College of Physicians investigated the matter and found that some of the reported cases were well founded, but said "The number of alleged failures has been surprisingly small, so much so as to form certainly no reasonable objection to the general adoption of vaccination" Within the next few years the proportion of post vaccinal smallpox was found to be increasing, and in some epidemic seasons they presented a very alarming total[3] It was claimed that these cases of post vaccinal smallpox were not chargeable to vaccination properly performed, but were due to spurious vaccination But this claim was disproven to such an extent as to perplex and disappoint many advocates of vaccination Injudicious friends of vaccination endeavored to prevent publicity being given to the facts, and the enemies of the measure decried it with the zeal which has ever characterized their fight upon this, the most beneficent gift to man Simon very properly says "At no moment in the progress of Jenner's discovery had impartial investigation been needed more than now, for, partly by the facts themselves and partly by hostile overstatements of them, public confidence began to be disquieted There seemed a breach in the contract under which vaccination had been accepted In what had promised so much, failures were all the more conspicuous, men looked to them, even where most exceptional, rather than to the successes of vaccination, and there were (1820-35) not a few persons whose minds began to misgive them whether the old plan of smallpox inoculation had not perhaps been too easily abandoned"

In 1818, after vaccination had become general in Scotland an epidemic of smallpox visited the inhabitants—a large proportion of the smallpox patients having been previously vaccinated This gave rise to great surprise, and the prophylactic virtues of vaccination were freely discussed An examination into all the facts relative to these cases of post vaccinal smallpox so conclusively demonstrated the beneficial results of vaccination that public confidence in the measure was regained The cases of post vaccinal smallpox were so much milder than in the unmitigable variety that it gave rise to the term varioloid

In Sweden an epidemic of smallpox appeared in 1824, in which 103 cases of post vaccinal smallpox proved fatal, 69 of these presenting good vaccinal scars and 34 less perfect vaccin scars Smallpox assumed epidemic proportions also in Germany, France, Italy and London and in many cases appeared among the inhabitants who had been vaccinated in childhood

In Ceylon the government of Great Britain, at an early period of vaccination, had the population so generally vaccinated, and so successful did the measure seem that smallpox was wholly banished from the island for a term of years In 1819, however, Ceylon suffered a widespread epidemic of smallpox, which was marked by great virulence of the disease In this epidemic many inhabitants who had previously been vaccinated in childhood, contracted smallpox This island had a like experience in 1830, again in 1833 and again in 1836 In the epidemic of 1833 fully 75 per cent of those contracting smallpox had been vaccinated in childhood

Denmark was visited by several epidemics of smallpox between the years 1824 to 1835 Gregory says "Yet in no country in Europe has more attention been paid to the practice of vaccination, both as to the numbers submitted to the process and the purity of the lymph employed" Notwithstanding these facts in Copenhagen, between 1824 to 1835, 3,839 cases of smallpox were observed, 80 per cent of this number had been vaccinated during childhood Even under these discouraging facts the value of vaccination was conclusively demonstrated, for the mortality in post vaccinal smallpox was only 2 13 per cent

The British army furnishes valuable statistics proving the proposition under discussion From 1835 to 1838 the average strength of the army, including men, women and children was 105,000 This force (including women and children) had been thoroughly vaccinated, yet 1,025 of them contracted smallpox and 122 of them died, a mortality of 11 9 per cent

The records of almost all hospitals prove that the majority of cases of smallpox from a community generally vaccinated are among those who have been vaccinated during childhood Dr Gregory's service at the London Smallpox Hospital (1826 to 1850) has been divided into quinquennial periods with the following results In the first period the number of cases was 1,262, of which 34 per cent had been vaccinated, in the second period the number of cases was 1,331, of which 36 per cent had been vaccinated, in the third period there were 1,763 cases, of which 41 per cent had been vaccinated, in the fourth period, number of cases 1,643 of which 43 per cent had been vaccinated, in the fifth period, number of cases 1,780, of which 52 per cent had been vaccinated Thus we see a gradual though decided increase of cases in persons previously vaccinated—the proportion of cases of post vaccinal smallpox from the first quinquennial to the last having been 18 per cent

In the London Smallpox Hospital Marson says the total number of smallpox patients received during the ten years 1855 to 1865, amounts to 7,326, of which 78 per cent had been vaccinated

Dr Welch, physician in charge of the Municipal Hospital, Philadelphia, Pa, says that during the epidemic of smallpox, 1871-72, the number of cases received amounted to 2 377 of which 68 per cent had been vaccinated in childhood In the same hospital in the epidemic of 1880-82 the number of cases admitted into the hospital was 1,659, 54 per cent having previously been vaccinated

Similar data might be presented from numerous sources but it is unnecessary Enough has been given to conclusively prove that smallpox occurring in persons who had been vaccinated in infancy is of much more frequent occurrence than is witnessed in individuals previously attacked by smallpox

Let us now examine the question of redevelopment of susceptibility to smallpox This redevelopment of susceptibility progressively increases up to a given period of life, the greatest increase up to a definite point corresponding with the length of time intervening primary vaccination

The following tables, selected from many at hand, demonstrate this fact

Ages	Gregory of London		Helm of Württemberg	Mohl of Denmark
	Cases	Deaths	Cases	Cases
Under 5 years of age			40	11
From 5 to 10 years	5		68	102
From 10 to 15 years	25		186	17
From 15 to 20 years	90	6	275	187
From 20 to 25 years	106	16	239	[illegible]
From 25 to 30 years	55	8	172	19
From 30 to 35 years	13	1	75	2
Above 35 years of age	4			
Total	298	31	1,055	[illegible]

The following table compiled by Dr Welch from the Municipal Smallpox Hospital, Philadelphia, Pa, shows 2,907 cases of post vaccinal smallpox admitted into the hospital from 1871 to 1883, including the cases classified according to the quality of vaccinal scars in individuals below the age of puberty

		Cases	Deaths	Percentage of death
Under 5 years of age	Good cicatrix	1	0	
	Fair cicatrix	1	1	
	Poor cicatrix	[illegible]	1	
Total		10	[illegible]	
From 5 to 10 years	Good cicatrix	11		
	Fair cicatrix	9		
	Poor cicatrix	2	[illegible]	[illegible]
Total		4[illegible]	[illegible]	1[illegible]

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[36] Seaton's Hand book of Vaccination p 223

[3] John Simon Royal Vac Commission 1889 p 78

		Cases	Deaths	Percentage of deaths
From 10 to 15 years	Good cicatrix	45	2	4.11
	Fair cicatrix	18	2	11.11
	Poor cicatrix	36	4	11.11
Total		99	8	8.02
From 15 to 20 years of age		388	47	12.11
From 20 to 25 years of age		745	96	12.88
From 25 to 30 years of age		580	92	15.86
From 30 to 35 years of age		356	64	17.97
From 35 to 40 years of age		249	51	20.48
From 40 to 45 years of age		161	35	21.67
From 45 to 50 years of age		105	22	20.95
Fifty years of age and upward		175	63	36.00
Grand total		2,907	191	16.80

Sufficient data have been presented to conclusively demonstrate that it is and has ever been during the practice of vaccination, fallacious to contend that primary vaccination always confers upon the recipient an immunity equal to that which he would enjoy had he previously had an attack of smallpox. From numerous data throughout this paper it must be evident to every student of vaccination that a primary vaccination made in infancy confers upon the individual so treated a positive and well nigh unvarying protection against smallpox for an unknown number of years, generally to puberty, and that in a considerable, though undetermined, proportion of such individuals a redevelopment of susceptibility to contract smallpox ensues in consequence of the deterioration of the protective power which vaccination had exerted against smallpox. This fact in no wise militates against the efficiency of vaccination in the prevention and control of smallpox, nor does it detract one iota from the splendor of the discovery of the immortal Jenner. An appreciation of this fact places vaccination upon the impregnable rock of truth, and enables Jenner's successors to intelligently take the one additional step necessary to stamp out smallpox, *i. e.*, revaccination.

It being an incontrovertible fact that a thorough primary vaccination protects the majority through life from smallpox, but that in a considerable proportion of primary vaccinations a redevelopment of susceptibility to smallpox ensues, and inasmuch as we are utterly unable, from examination of vaccin cicatrices or otherwise, to decide who are not enjoying the full protective influence of vaccination, it is our duty to revaccinate every vaccinated person within ten or fifteen years from the primary vaccination, and in the face of exposure to smallpox to revaccinate even though the primary vaccination had been performed only several months previously.

PROPOSITION 9

A good primary vaccination may be made in infancy, coupled with successful revaccination at puberty, as fully protects every individual so treated from smallpox as if he had previously had an attack of smallpox.

Revaccination at puberty being admitted to be necessary to confer upon the recipient the full protective benefit of vaccination, let us ascertain what this protective power has been ascertained to be.

Experience in Smallpox Hospitals. Dr. Welch, physician in charge of the Municipal Smallpox Hospital, Philadelphia, Pa., says: "My experience in hospital work, which as regards time, comprises a period of more than twelve years (Jan. 1, 1871 to May 1, 1883), entirely agrees with that of Marson and other observers just quoted. Only very few patients during that time have been admitted into the hospital under my charge, with varioloid, who presented evidence of having been successfully revaccinated, and these few had the disease in so mild a form that death has not occurred in a single instance. During my service no person entering the hospital in any official capacity, as resident physician, steward, matron, nurse, laundress, or other employe, who had taken the precaution to be revaccinated before entering upon duty, has suffered from smallpox in any form whatsoever. But, on the other hand, I have seen a few employes in whom revaccination was for some cause omitted, become infected by the disease."

Dr. Seaton (in report of Medical Officer of Privy Council and Local Government Board for 1874) says: 'The observations which were made during the recent epidemic (1870-1873) afforded remarkable evidence of the value of revaccination, not merely in controlling the mortality from smallpox, but usually preventing altogether the occurrence of the disease. Its power of preventing smallpox under circumstances the most favorable for contracting it was tested on a very large scale on the nurses, servants and attendants of the various hospitals established for the treatment of the epidemic in the metropolis and in the provinces, the attendants in the hospitals of the Metropolitan Asylum Districts alone amounting at one time to above three hundred. In every hospital report which has reached me it is specially stated that not a single one of these officials, who had been revaccinated before coming to take duty at the hospital, contracted smallpox. On the other hand, a few cases occurred among some nurses and servants in the hospitals of the Metropolitan Asylum District, whose revaccination in the pressure of the epidemic had been overlooked, and there was one case in a nurse who, having had smallpox previously, had consequently not been vaccinated on coming into the hospital. There was also a modified case in a nurse in whom revaccination had been performed, but not till after her arrival at the hospital, and when the smallpox infection had already been received. The cases of smallpox which were admitted for treatment in the several hospitals in persons who had been successfully revaccinated were very few and very slight. In the hospitals of the Metropolitan Asylum Board, in which upward of 14,800 cases of smallpox were treated, there were but four cases in which there was good evidence of revaccination having been performed with effect, and these were all light cases. In Liverpool, says Dr. French, revaccination was found a constant and perfect protection against smallpox. In the Newcastle-on-Tyne smallpox hospital, in which 778 cases were treated, there were two in which revaccination was alleged to have been successfully performed, one of them ten years and the other four years before the attack of smallpox, both of them recovered. In the same hospital eight patients were admitted, stated to have had smallpox, five of whom were distinctly marked by it, one of the three not marked died, the remaining seven all recovered. In the Leeds hospital there were four cases in which previous revaccination was alleged, but in none of them was the evidence of revaccination conclusive. One of them, in which the revaccination was said to have been done at seven years of age, was fatal; the other three cases were mild. There were three (fatal) cases of smallpox in persons believed to have had smallpox previously, but the evidence of the former smallpox is not stated. Similar infrequency and mildness of smallpox after revaccination was noted in the hospitals abroad. In the municipal smallpox hospital at Berlin, in which 1,529 cases were treated who had been vaccinated, only nineteen of these were in persons (all above 30 years old) who had been successfully revaccinated; they were all of them cases of varioloid, or of variolous fever without eruption, and none of them died. In the same hospital there were seven cases (three of them fatal) in persons who had previously had smallpox. In the Baracken Lazarethe, used also as smallpox hospitals in the same city, in which 1,805 cases were treated in persons who had been vaccinated, seven only were in persons who had been successfully revaccinated, of whom six had a mild attack and one (a woman 60-70 years old) had the hemorrhagic form and died. In the hospital at Leipsic, out of 1,501 vaccinated patients there were thirteen who had been successfully revaccinated in early life, all of whom recovered; in the same hospital there were twenty-two cases in persons who had had previous smallpox, and of these six died. In the hospital at Hamburg the cases in persons who had been revaccinated were more numerous, amounting to fifty-nine out of a total of 2,267 vaccinated patients, and there were three deaths."

Dr. Marson, having the greatest experience perhaps of all writers upon this subject, says of the test of vaccination in preventing smallpox: "For thirty years we have revaccinated all the nurses and servants who had not had smallpox, on their coming to live at the smallpox hospital, and not one of them has contracted smallpox during their stay here."

[38]*Manchester Royal Infirmary.*—Dr. Henry Thomkins, medical superintendent of the fever hospital belonging to the Manchester Royal Infirmary at Monsall, in a paper recently read at Owens College, said: "The most striking of all evidence is, perhaps, that derived from the smallpox hospitals themselves. Here the protective influence of vaccination is seen and proved in a manner beyond all cavil. At Highgate, during an experience of forty years, no nurse nor servant, having been revaccinated, has ever contracted smallpox, and evidence of the same character I can myself bring forward, for, during the whole time that I have had charge of the fever hospital more than a thousand cases of smallpox have passed under my care, yet no servant, nurse, porter, or other person engaged there has, after revaccination, ever taken it, though exposed daily to infection in its most concentrated form. . . . . Again, among all the students who during the past two years have attended the hospital for clinic instruction, not one has suffered, all having been revaccinated before being permitted to enter the smallpox wards. . . . . I defy the most enthusiastic or conscientious of anti-vaccinators to produce evidence like

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[38] Annual Report of the Board of Health of Detroit, Mich., 1882, pages 109 and 110.

this on his side of the question, or to bring forward even half a dozen persons, choose them whence he may, who have not been protected against smallpox, and expose them as the students are exposed, without more or less of the number taking the disease."

At Versailles, in 1828, during an epidemic of smallpox of marked severity, revaccination was first tested as a means of checking the ravages of smallpox. A large number were revaccinated, and no one of these revaccinated individuals contracted smallpox.

In Copenhagen, there were three severe epidemics of smallpox between the years 1828 and 1835, during which not a single revaccinated person was attacked by smallpox.

In the epidemic in Heidelberg, 1843-44, notwithstanding vigorous and thorough vaccination, a large number vaccinated ten or more years previously contracted smallpox, yet not one revaccinated person was attacked.

In Wurttemberg with a vaccinated population of 1,263,298 during five years the total number of cases of smallpox was 1,677,—354 of these were cases of confluent smallpox, 1,043 were cases of varioloid—being about one case of failure of protection against smallpox to 217 vaccinated persons. In a few years subsequently, of 44,000 revaccinated subjects, 20,000 took the vaccin disease perfectly, 9,000 imperfectly, and failed with 15,000, the successful revaccinations being almost exclusively in those who had been vaccinated many years previously and only 3 of these in a subsequent epidemic of smallpox contracted the disease.

Of 14,334 revaccinations in the army of Wurttemberg, 1831–1835, 8,845 had what are described as genuine vaccin marks or scars, and of this number 31 per cent were successfully revaccinated, aborted vaccin vesicles in 29 per cent., and revaccination failed in 40 per cent. With those having imperfect marks of previous vaccination, revaccination succeeded in 28 per cent., modified in 26 per cent., failures 46 per cent. Mr. Simon, in his able digest of the subject, published by the General Board of Health, shows that, during the years from 1833 to 1837, notwithstanding the fact that smallpox had been sixteen times brought into the army of Württemberg, there had ensued among the 14,334 revaccinated soldiers one single instance of unmodified smallpox.

In the Prussian army, in 1840, revaccination was performed upon 43,522 soldiers. Upon these soldiers were found distinct vaccin cicatrices in 34,573, indistinct vaccin scars in 6,177, in 2,772 persons no scars of previous vaccination were found although they had formerly been vaccinated. The result showed 20,952 successful revaccinations, 8,820 partially successful, and 13,750 unsuccessful revaccinations. Revaccination was practiced in this army because of the increase of the number of cases of post vaccinal smallpox among the soldiers. For ten years prior to 1831 these cases had been observed, and from 1831 to 1833, 312 deaths had occurred among the troops formerly vaccinated. For twenty years subsequent to revaccination two deaths annually have occurred from smallpox, whereas 104 deaths annually occurred before revaccination was practiced.

In the Bavarian army revaccination has been compulsory since 1843, and for twelve years—1843 to 1855 as shown by the report of the minister of war—not a case of unmodified smallpox had occurred. A few cases of varioloid had occurred during this period of time, but not a single death from smallpox.

Dr. de Kerschensteiner chief medical officer of Bavaria, as the result of official statistics of Bavaria for ten years, 1871–80, says: "Of those once vaccinated, 12 per cent. of those attacked, of the revaccinated only 7½ per cent., but of the unvaccinated, 46½ per cent. died of smallpox."

The annual reports of the Medical Departments of the Army and the Navy of Great Britain, afford most striking proof the protective power of revaccination in adult populations. The soldiers and sailors serving in the United Kingdom may be looked on as virtually a wholly protected force, for now, for several years past, every man serving in the Army or Navy, whether or not he has marks of smallpox or of previous vaccination, is required to be vaccinated on entering the service. This rule has been in force in the army since 1858, but until some ten years later, there was no rule in the navy requiring the vaccination of all who entered, whether previously protected or not. This has, however, now been rectified and the result is seen in the fact that whereas in the days of the absence of such rule the smallpox death rate was much higher in the navy than in the army, the rate is now considerably lower, being in fact, for the six years 1873-78, absolutely *nil*. Indeed, in the whole of the British Navy in all parts of the world, numbering 46,400 men, there were in 1878 but nine cases of smallpox, four on the home station, three on the East India, one on the Mediterranean, one on the China stations. All these nine cases are noted as mild, and were unquestionably modified by revaccination. In the very large proportion of the men employed in both services, the protection against smallpox is that afforded by vaccination. In the year 1877 only 5.45 per cent., of recruits proved on examination to have marks of smallpox, while 90.85 had marks of vaccination, and 3.69 had neither vaccination nor smallpox marks.

If the records of these protected services be examined to see what ravages are now made in them by smallpox, the disease which, according to Sir Gilbert Blane, was, before the discovery of vaccination, "one of the great embarrassments to the operation of armies," and obliged ships of war occasionally to quit the seas, we find that during the eighteen years 1859-76 inclusive, the annual deaths from it were considerably less than one per 10,000 (.643 only) amongst troops serving in the United Kingdom. More than a third of the whole of the deaths during these eighteen years occurred during the smallpox epidemic of 1871-72, the exceptionally severe character of which has already been adverted to. Among the sailors employed on the home force, there were, during the 20 years, 1859-78, as nearly as possible, one per 10,000 (1.0085) attacked annually with smallpox. During the same period the cases of smallpox did not exceed annually 9.05 per 10,000 soldiers and 16.16 per 10,000 sailors. If the influence of the ferocious epidemic of 1871-72 be duly allowed for, a steady decrease in the number of cases and of deaths will be observed from the commencement. In fact, omitting these two years, there has not been a single death from smallpox in the navy 1864 and 1880 *i. e.*, sixteen years ago. The recent statistics of the army are hardly quite so favorable, but still they show the year 1865 to 1880, with the exception of the epidemic years 1871-72 only one single soldier out of the 80,000 troops serving in the United Kingdom, has on an average died of smallpox in each year.

TABLE O.—Table showing for each of the years 1870-83 the mortality from smallpox in Berlin, in London and in Vienna per 100,000 inhabitants.

Year	Berlin	London	Vienna	Year	Berlin	London	Vienna
1870	28.37	30.20	46.71	1877	0.40	70.98	81.01
1871	632.56	242.16	74.90	1878	0.78	38.81	7[illegible].11
1872	138.61	53.80	536.98	1879	0.75	12.13	40.91
1873	11.21	8.55	228.50	1880	0.81	12.59	73.[illegible]2
1874	2.47	1.66	135.26	1881	4.74	61.91	12[illegible].9[illegible]
1875	5.19	1.32	113.50	1882	0.43	11.07	108.29
1876	1.81	20.80	167.80	1883	0.33	3.00	9.60

Average for nine years from 1875 to 1883: Berlin, 1.7; London, 25.83; Vienna, 89.29.

The above table furnishes incontestable proof of the efficacy of revaccination. The vaccination law of Prussia requiring vaccination at the age of 1 year of age and revaccination at the age of 12 years was enacted April 8, 1874, and has been rigidly enforced. In England, primary vaccination is compulsory but revaccination, while urged upon the people, is not required except in the face of exposure to smallpox. In Austria neither vaccination nor revaccination is compulsory. The Austrian government warmly recommends vaccination and revaccination, but citizens adopt or reject the recommendation at will. Now, for the result. For the five years in the table, 1870 to 1874 inclusive, prior to compulsory vaccination, the average annual smallpox mortality per 100,000 inhabitants of Berlin was 162.64, while during the nine years of enforcement of compulsory revaccination at 12 years of age, it was 1.7 per 100,000 inhabitants. In London, it was 66.27, while during the nine years 1875 to 1883 inclusive, it was 25.83. In Vienna, 1870 to 1874 inclusive, it was 205.41, while in 1875 to 1883 inclusive it was 89.25.

Again, during the nine years, 1875 to 1883 the average annual smallpox mortality in each of the three cities was as follows: Berlin, 1.7; London, 25.83; Vienna, 89.29 per 100,000 inhabitants. What is lacking to convince any sane man when such figures are presented?

In the smallpox epidemic in Sheffield, England, 1887-88, as previously shown, a house to house examination made under direction of Dr. Barry, inspector of the local government board, disclosed the fact that 64,431 citizens of Sheffield had been revaccinated and only 27 or 0.04 per cent. of the total revaccinated population had contracted smallpox, and one person, rather more than 0.001 per cent., died. 8,198 of these revaccinations were made prior to 1887, and of this number 25 or 0.30 per cent. contracted smallpox and 1 or 0.01 per cent. died. The remaining 56,233 were stated to have been revaccinated during 1887-88, and of these 2 persons or 0.004 per cent. were said to have contracted smallpox and none of them died. The facts detailed by Dr. Barry show however [illegible] ther these two cases were smallpox.

The enumerators under Dr. Barry repo

number of persons living in Sheffield who had suffered attacks of smallpox prior to 1887 amounted to 18,292 persons Of these, 23, or 0 13 per cent, contracted smallpox, of which 5, or 0 3 per cent, died, the percentage of deaths to cases of second attacks of smallpox having been 23 5 per cent

VACCINATION AND SMALLPOX IN UNITED STATES ARMY AND NAVY

The following tabular statements relative to vaccination and smallpox in the United States army and in the United States navy have been kindly furnished me by Surgeon General Sternberg of the army and Surgeon General Tryon of the navy These tables richly illustrate the value of vaccination in prevention of smallpox

In the army all men are required to be protected from smallpox by vaccination at time of enlistment Now, for the result For the eight years, 1884 to 1891 inclusive, in an army never numbering less than 23,226 men, there were 17 cases of smallpox and only three deaths from this disease

In the navy for the sixteen years, 1880 to 1895 inclusive, among 68,944 men there were 95 cases of smallpox and only five deaths therefrom

Vaccination and Smallpox United States Army, Years 1884-91 inclusive

Years	Mean Strength	Cases Vaccinated	Cases Vaccination Undetermined	Primary Vaccination	Revaccinations	Total	Primary Successful	Revaccinations Successful	Total Successful
1884	21 034			819	6 839	7,658	271	856	1 127
1885	21 138			1,370	7,175	8,815	878	1,110	1,488
1886	23,672	1	2	857	6,319	7,176	444	1 465	1 909
1887	23 841	2		1 398	8 404	9 802	661	2 099	2 760
1888	24,726	a2		1 605	9,603	11,208	891	2 920	3 811
1889	25 008	4		1,800	10 377	12,177	944	2,985	3,929
1890	21 234		1	1,224	6 230	7,454	729	2 052	2,781
1891	23,269	a2	a3	2,882	7 971	10 853	1,155	2,948	4 103

a 1 died

Report of Vaccinations	1880–1885		1885–1890		1890–1895		Total number Vaccinated
	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	
No evidence of previous vaccination	1 560	2 011	1 108	1,803	1,245	1,767	9 547
Presenting good cicatrices	6 687	18 872	5,563	12 012	5,024	13 597	57,155
Evidence of former attack of smallpox	218	770	193	570	116	375	2,242

Total number vaccinated, 68,941—Successful, 21,761 unsuccessful 47,180

Admissions and Deaths from the following diseases from 1880 to 1895, in the United States Navy

Disease	1880–1885		1885–1890		1890–1895		Total	
	Cases	Died	Cases	Died	Cases	Died	Cases	Died
Vaccina	133		368	1	501		1,002	1
Varicella	3		7		11		21	
Variola	18	1	20	2	23	3	61	6
Varioloides	28		6				34	

(*To be continued*)

SOCIETY PROCEEDINGS

American Association of Obstetricians and Gynecologists

Ninth Annual Meeting held in Richmond, Va, Sept 22-24, 1896

(*Concluded from page 816*)

Dr WILLIAM G MYERS, of Fort Wayne, Ind, read a paper entitled

ATRESIA WITH RETENTION OF THE MENSES, TREATMENT

The author reported two cases of atresia, one with absence of the vagina and uterus and the other with retained menstrual *fluid* The last was operated upon successfully He believes that in a case of atresia of the vagina with retention of menstrual fluid in the uterus, an operation ought to be completed at one sitting, adopting the direct method He thinks the teaching in a recent work that "the best way is to make a small opening into the mass and allow the contents to flow away gradually," is not sound He could not therefore see in rapid evacuation such great dangers as were referred to in the books

PRINCIPLES AND PROGRESS OF GYNECOLOGY

The president's address was delivered by Dr JOSEPH PRICE, of Philadelphia He first thanked the Association for the distinguished honor in electing him president, which he said was the most gratifying expression of personal and professional kindness He said the Association was made up of earnest, enthusiastic and eminent men of the medical profession We had more than a passing interest in the record of the transactions of our medical and surgical associations From them the history of the progress of medical and surgical science would be made up, they would reflect the advanced thought and opinions, the strength of the endeavors, the results of clinic experience and research of the profession of this period We had the inspiration of the reflection that our high service was that of humanity, and Dr Price said the members were there to learn through the interchange of the best counsel how to make that service the best

Dr GEORGE H ROHÉ, of Catonsville, Md, read a paper on "Some Causes of Insanity in Women," of which the following is an abstract

The general causes of insanity are the same in women as in men, but there are modifying conditions in the life history of men and women that influence the causation of mental disturbances in the two sexes General paresis and alcoholic insanity are more frequent in men because the latter are exposed to their causes to a greater degree and intensity Menstrual, puerperal and climacteric insanity are on the other hand self evidently limited to women

Women are especially subject to mental disturbances dependent upon their sexual nature at three different periods of life puberty, the child bearing period, and the menopause The functions and activities peculiar to these periods have an intimate etiologic relation to certain insanities It is probable, however, that these functions have no influence in the production of insanity in their normal condition It is only when the functions are disturbed, or when pathologic conditions are present that they have any unfavorable influence upon the psychic functions

At the period of puberty, menstrual derangements are not infrequently causative of mental disturbances which do not yield until the menstruation becomes normal In the puerperium, insanity is dependent upon septic absorption, or the consequences of other morbid conditions of the reproductive organs Lactational insanity may be due to physical exhaustion, but in some cases pathologic conditions of the genitals or of the breasts seem to have an etiologic relation At the menopause the disturbances of nutrition associated with the arrest of menstruation often produce insanity, and in many of these cases there will also be found abnormal alterations of the reproductive organs The insanities following gynecologic operations are either due to septic conditions, or are merely due to the rapidly induced menopause Their frequency has been much exaggerated

Dr WALTER P MANTON, of Detroit, Mich, read a paper on

THE RELATION OF VISCERAL DISORDERS TO THE DELUSIONS OF THE INSANE

He said, that the delusions of the insane are often an expression of somatic peripheral irritation has long been recognized, but observation leads Dr Manton to believe that the importance of these mental manifestations as indices of bodily suffering was frequently ignored as a mere phase of the brain disorder, especially in the instances of supposed fancied visceral disturbances

For convenience of consideration, he placed the so called visceral lesions in four classes 1, Delusions arising de *novo from* the diseased activity of the brain, 2 delusions regarding external or visible abnormal bodily conditions, 3, delusions arising from easily determined visceral disorders, and 4, delusions dependent upon obscure abdominal and pelvic states The last three classes were briefly considered

One can readily understand how visible bodily defects may be misinterpreted and the mind of the patient become confused as to the real nature of the condition which is always more or less open to inspection The site of a dermoid tumor *slowly* developing in the abdominal walls led one of his patients to believe herself pregnant, but the removal of the growth soon dispelled the illusion In another instance a uterine fibroid called out the same impression, and the patient requested the physician to listen to "hear the young ones" The appearance of a complete procidentia uteri in another case gave rise to the idea that the protruding mass was the male organ, and under such conditions the patient could no longer retain her feminine appellation, and immediately rechristened herself "John" Such examples might be multiplied, for they were of frequent observation by all who had to do with the insane In such instances the connection between the delusion and the somatic disorder was obvious, being, as it were, on the surface In the third class, however, the relation of the condition to the expressed idea was not always so apparent

The author reported interesting cases In each of the patients the delusions referred chiefly to the abdomen, and in each an abnormal condition of some of the viscera was found but a condition in which the early intervention of surgery would have afforded great, if not permanent, relief to the sufferings of patients Laparotomy, in properly selected cases of the insane in whom visceral delusions are a pronounced and constant feature of the mental disorder, was not only justifiable, in his opinion, but urgently demanded in the interest of the patient

Dr **David T Gilliam**, of Columbus, Ohio, read a paper on

OOPHORECTOMY FOR THE INSANITY AND EPILEPSY OF THE FEMALE, A PLEA FOR ITS MORE GENERAL ADOPTION

The author showed in this paper that oophorectomy was a logical and legitimate operation for the epilepsy and insanity of the female Insanity is hereditary, as also epilepsy They constitute the greatest curse to humanity An insane father or an insane mother brings more misery into the world than any other father or mother The offspring of such a parent, when ushered into the world, would be confronted by the awful specter of impending doom, and though he called on the rocks or mountains to fall on him, the curse would pursue and overtake him Dr Gilliam then gave a picture from real life He would limit the operation to those in whom the malady appears in some way to be connected with, or dependent on sexual disturbance He would go further and include all who were willing to undergo the operation to save themselves and their offspring from the miseries which awaited them

Dr **J F Baldwin**, of Columbus, Ohio, followed with a paper entitled

TREATMENT OF THE STUMP TO PREVENT ADHESIONS

He estimated that about 1 per cent of all cases operated upon die from intestinal obstruction, the result of adhesions to the stump To diminish as much as possible the danger of adhesions, he recommended the careful closing in of stumps by a peritoneal flap, and described the method of securing this flap In cases where the pedicle is, after a simple ovariotomy, not too large, he recommended that the pedicle be so ligated that the ends of the ligature were on the anterior face of the pedicle, that the ends of the ligature be then carried across the face of the stump, down and through the broad ligament, transfixing the ligament from behind forward The ligatures should be passed through about half an inch apart As the ends are drawn through and tightened, the raw end of the stump is rolled down and under the broad ligament, so as to be entirely protected He had used this method in a large number of cases and with entirely satisfactory results

Thomas E McArdle of Washington, D C, read a paper entitled

ABDOMINAL SECTION FOR TUBERCULAR DISEASE

The author formulated in a terse manner what had already been done by surgical means for the relief of women suffering from tuberculosis of the generative organs There is no doubt that tubercular disease of the female genitalia is more frequent than is generally supposed Every portion of the genital tract may be affected, the order of frequency for the various portions being the tubes, body of the uterus, ovaries vagina, cervix and vulva The tubes are affected in all cases, the body of the uterus in about three fourths of the cases and the ovaries in about one half of all cases Tuberculosis of the body of the uterus is not at all a rare affection and has been frequently discovered in autopsies upon phthisical subjects It can be the only focus of disease of the body, but it is generally associated with disease of the tubes and is generally secondary to disease of that organ Of all the female genitalia, the vulva is the least liable to tubercular infection The author then dwelt upon the etiology of tuberculosis of the female genitalia, after which he detailed the various ways by which the disease might be caused or transmitted

The treatment of tuberculosis of the vulva, vagina and cervix did not come within the scope of the paper The destruction of the tuberculous focus by fluid or solid caustics had been advocated by some surgeons, and if these means were not satisfactory, extirpation of the part was recommended We had a very efficient means for the removal of the tubercular ulcers of the vagina and vulva in the application of the tincture of iodin They rapidly disappear under its use In case of failure, however, excision could be practiced When the cervix is involved, and not the body of the uterus, the method of treatment advised for the vulva and vagina should be given a fair trial, but if they prove ineffectual no time should be lost in amputating the cervix When the endometrium is involved there is a diversity of opinion as to the best method of procedure It has been recommended to first curette the organ and remove all evidence of disease The iodoform suppositories are introduced into the uterus If there should be a recurrence of the trouble, removal of the organ is advised If we bear in mind that tuberculosis of the body of the uterus is so frequently associated with the same disease in the tubes and ovaries, it seems to Dr McArdle that having once ascertained the existence of tubercular disease in the uterus, it is our duty to look for a similar condition in the tubes and ovaries, and, if found, it behooves us to waste no time in curetting the uterus and treating it with iodoform, but to proceed at once to the performance of an abdominal section for the removal of the uterus, tubes and ovaries This heroic method of treatment is advocated in primary disease of these organs In a case complicated with tubercular peritonitis there would be no special danger in removing the tubes and ovaries We all know how many cases of that disease have been cured by section and drainage We could then curette and treat the body of the uterus

Dr **Charles A Reed** *of Cincinnati, Ohio, read a paper* entitled

MELANO SARCOMA OF THE FEMALE URETHRA, URETHRECTOMY RECOVERY

This interesting case was as follows Mary E Y, aged 64, single, was brought to his private hospital Dec 3, 1895 The patient had had no previous serious illness There was no history of tuberculosis or syphilis in the family The vaginal condition of the genitalia precluded the supposition of venereal infection of any character Her general health was good, although there was some emaciation about the neck and breasts, the latter of which were flabby—changes no doubt incident to age Careful examination revealed no diseased conditions about either the lungs or heart Careful palpation and percussion of the abdomen yielded negative results

About eight months previously, *i e*, in April, 1895, she began to notice some pain accompanied with blood on micturition This was shortly followed by a more or less constant pinkish discharge from the genital fissure The self examination which followed revealed a tumor at the meatus urethræ This tumor continued to increase in both size and hemorrhagic tendency until she was prompted to consult Dr Morris, who curetted the neoplasm thoroughly and treated it with styptics When the patient came under Dr Reed's care he found a black lobulated and eroded mass about three centimeters in diameter separating the labia majora The orifice of the urethra was in the very center of this mass A careful vaginal examination was not made at the time, as the vaginal structures, present in their integrity, rendered such an operation very painful

Operation was done the next day, December 1 The small blade of a Jones' speculum was introduced, the patient being in the Simon's posture, the urethra was exposed in its entire length A longitudinal incision was made through the mucous membrane along the dorsum of the urethra from a point where the presenting part of the mass was eroded to the base of the bladder Another incision through the mucous membrane was made at right angles to the foregoing at point far enough above the eroded mass to insure healthy tissue The mucous membrane was then dissected back in two lateral flaps and the urethra was enucleated The urethra was found to be distinctly conical in shape, the base of the cone being at the meatus, the apex at the bladder Care was taken to dissect out the canal to a point manifestly above the zone of malignant involvement When this point was reached, but a slight distance from the bladder, the canal with the neoplastic walls was excised The cut margin of the cystic segment of the canal was seized at various points in its circumference by Kocher's forceps, brought down by gentle traction and fixed by interrupted sutures of silk worm gut to the vaginal mucous membrane A self retaining catheter was inserted and the patient put to bed The sutures were removed on the eighth day The catheter was dispensed with on the twelfth day The patient sat up on the fourteenth day when she found that she could retain her urine and void it at will She was dismissed December 21, entirely healed She remained in good health until July 1 following—seven months when she again summoned Dr Morris because of some stomach symptoms He found her suffering from persistent vomiting, and with a large mass in the epigastrium This mass rapidly increased in size until it occupied all of the area between the navel and the breast, its nodular characteristics becoming more and more pronounced She died of exhaustion July 14, 1896, having had no recurrence whatever of the urethral trouble No autopsy was permitted

Dr J B Murphy of Chicago, addressed the Association on

THE SUTURE OF LARGE VESSELS INJURED IN OPERATIONS

He demonstrated the method employed by him He said in 1762 Lembert conceived the idea of suturing injuries to vessels He made two experiments, in both of which he failed Dr Murphy then referred briefly to the experimental work of other surgeons along this line, pointing out their successes and failures His own researches and operative work lead him to believe that, where a large vessel is injured in an operation, a transverse division of it, not exceeding two thirds of its circumference, the surgeon can resort to immediate suture without resection, and, if the field of operation be aseptic, can feel more certain that he will have union of the vessel and continuation of the current than he could where he sutures the intestine as for resection of the bowel He believes from his observations that the changes are better with the suture The importance of this concerned surgeons more in the treatment of aneurysms

Coming to the question of stab and bullet wounds of the extremities, he said there was a great field for improvement in our past operative work Formerly, we ligated vessels, and when this was done the inevitable result was death of the limb He believes that now such limbs can be uniformly saved, particularly in the aseptic cases With his present method of suturing large vessels, he is not afraid to suture any vessel in the body, feeling confident that adhesion or union will take place

CONTUSIONS OF THE ABDOMEN

A paper on the subject with report of cases and conclusions was read by Dr W G Macdonald, Albany, N Y

Contusions of the abdomen are always grave injuries The question of surgical intervention, although much discussed, can not be regarded as satisfactorily settled Seven cases of traumatic rupture of the stomach and small intestines are reported Two operations were undertaken, one recovery, one death the eighth day after operation from second rupture All the inoperative cases died Reference is made to the general absence of evidence of contusions in the abdominal walls when serious visceral injury has occurred Very slight causes, particularly if the intestinal canal is distended with fluids, may produce intestinal rupture, as the falling out of bed, a blow from a barrow handle The early symptoms of intestinal laceration are not always distinctive An analysis of two hundred cases of intestinal laceration as associated with abdominal contusion was made with a view to determining the symptoms The following topics are considered the important ones History of the nature of the injury, shock or collapse, pain, vomiting, pulse, temperature and physical signs That careful investigation of a given case will usually show sufficient symptoms to make an early exploratory abdominal section imperative

The following officers were elected

President Dr James F W Ross, Toronto, Ontario

First vice president Dr Geo Ben Johnston, Richmond, Va

Second vice president Dr John C Sexton, Rushville, Ind

Secretary Dr Wm Warren Potter, Buffalo, N Y

Treasurer Dr X O Werder, Pittsburg, Pa

Place of meeting Niagara Falls, N Y Time August 24, 25 and 26, 1897

The American Public Health Association

[Special Correspondence of the Journal]

The Twenty-fourth Annual Meeting of the American Public Health Association held at Buffalo, N Y, Sept 15-18, 1896

(Concluded from page 818)

Friday, Sept 18, 1896 Morning Session, 9 a m

The Association met an hour earlier than usual and listened to the final announcements of the local Committee of Arrangements by Dr Howe, for the excursions to follow the adjournment in the afternoon and next day

The Secretary reported that the Executive Committee had recommended the passage of the following resolutions which had been referred to it

1 The resolution of Dr Whitehall of New Jersey, that the standing committee on legislation be requested to report methods for rural sanitary administration which are in its judgment the most useful and promising

2 The resolution of Dr Walter Wyman of Washington D C

Whereas, yellow fever is believed to be the most subtle and dangerous of all epidemic diseases, and whereas, it is ordinarily conveyed into a new country from an infected seaport of another, and whereas, the continued and persistent presence of this disease in any seaport is believed to be unnecessary and may be prevented by proper engineering and other sanitary measures, therefore be it

Resolved, 1, That it is the duty of every government possessing seaports thus infected to institute such engineering and other sanitary measures as shall remove this menace to seaports of other nations, 2, that it is the duty of the governments continuously threatened with the invasion of yellow fever from a seaport in which this is allowed to persist, to make such expostulations to the government in possession of the offending seaport as shall cause the latter to adopt sanitary measures necessary to remove this obstruction to commercial intercourse and menace to human life

3 The resolution of Dr Durgin of Boston, protesting against the passage by the Congress of the United States of the proposed act preventing experimentation on animals

The Executive Committee further recommended the continuance of all the special committees except that on the centennial of vaccination, and the consolidation of the committee on the cause and prevention of diphtheria with that on the cause and prevention of infant mortality

Dr Wright of Connecticut inquired what had become of his resolution recommending the discontinuance of oyster planting at the mouths of polluted streams, and when informed that it had been tabled by the Executive Committee, for the reason that it considers the effort should be to first prevent the pollution of the streams, gave notice of an amendment to the constitution, making the Executive Committee consist of nine members, three of whom shall be elected annually

The Secretary reported forty additional names recommended by the Executive Committee for election to membership, for which the Secretary was instructed to cast the vote of the Association in block

Dr Probst, of the Auditing Committee, reported that the accounts of the Treasurer had been carefully audited and found correct

Mr Crosby Gray, Secretary of the Advisory Council, reported that the following members had been nominated by the Council as officers of the Association for the following year

For President, Dr Henry Buckingham Holbeck of Charleston, S C, Health Officer of the city of Charleston

For First Vice president, Dr Peter Henderson Bryce of Toronto, Canada, Secretary of the Provincial Board of Health of Ontario

For Second Vice president, Dr Ernest Wende of Buffalo, N Y, Health Commissioner of the city of Buffalo

For Treasurer, Dr Henry Dwight Holton of Brattleboro, Vt

For Members of the Executive Committee, Dr Henry Mitchell of Trenton, N J, Secretary of the State Board of Health of New Jersey, Dr U O B Wingate, Secretary of the State Board of Health of Wisconsin, and Dr Jésus E Monjarás of San Luis Potosi, Mexico, President of the Superior Council of Health of the State of San Luis Potosi, who were all thereupon elected to these respective offices by the vote of the Association

Ex presidents Gihon and Formento were delegated by the Chair to conduct the President elect to the platform, who made a very feeling address in acknowledgment

Mr Gray further reported that the Advisory Council had selected Toronto, Canada, as its place of meeting in 1897 Dr Plunkett, President of the State Board of Health of Tennessee, moved to substitute Nashville, Tenn, in which he was ably seconded by Dr A N Bell of Brooklyn, N Y Professor Bracken of the University of Minnesota moved to amend, being largely seconded, by substituting Minneapolis, Minn, and he was followed by Dr Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, who presented invitations from the Mayor of Philadelphia, the board of health of that city and the State Board of Health to meet in Philadelphia which was ably seconded by Dr Gihon, who as a Philadelphian argued the propriety of holding the twenty fifth meeting of the Association—its quarter centennial—in that city, where it had not assembled since 1874 He said that the presence of the Mayor of Ottawa, the capital city of the Dominion, backed by a strong delegation bearing an urgent invitation to go to that city, in a measure obliged us to hold our next meeting in Canada at Ottawa, having already met in Toronto in

1886 and in Montreal in 1894 After a lengthy and lively debate by the advocates of the various cities, Philadelphia was selected as the place of meeting in 1897

The appointment of Dr **Domingo Orvañanos** of the City of Mexico to be Assistant Treasurer for Mexico was then announced, and members appointed on the special committees authorized by the Association

The members of the new committee on transmissibility of infections and periods of danger from infected persons, constituted in accordance with the recommendation of the President in his annual address are Professor Eduardo Liceaga of the City of Mexico, Dr John L Leal, of Paterson N J, Surgeon Fernando Lopez of the Mexican Army, Medical Director Newton L Bates, U S Navy and Surgeon General J J Kinyoun, U S M H S

Professor Stephen Smith of the City of New York was appointed Chairman of the new committee on international cooperation in preventing the transmission of contagious diseases with authority to select his associates

The President, Dr Liceaga, then extended an earnest invitation on the part of Dr Rafael Lavista, Dr Manuel Carmona y Valle and himself as the Committee of Management of the 2d Pan American Medical Congress to all the medical members of the Association and their professional friends to attend that Congress which opens in the City of Mexico, November 16 and continues until the 19th

The thanks of the Association were then tendered the retiring President, who eloquently responded, expressing the hope that the community of interest between the United States and Mexico shown by his election might be unending, and to the retiring First Vice President for the able, prompt, and energetic manner in which he had assisted the President during the protracted sessions, and after a graceful response on his part, the scientific work was resumed in the following order Report of committee on the "Relation of Forestry to Public Health," by Professor **Robert C Kedzie**, of Michigan, Report of committee on "Transportation of Diseased Tissues by mail," by Dr **Henry Mitchell**, of New Jersey

Dr **Lee** commended the committee (Drs Mitchell of New Jersey, LaChapelle of Montreal and Orvananos of Mexico) for the admirable work they had already accomplished and in recognition of the fact that the Hon William L Wilson, Postmaster General of the United States had permitted the transmission of diseased tissues through the mail making their distribution possible, offered a resolution expressing the appreciation of the American Public Health Association of the deep scientific discernment exhibited by the Postmaster General in so doing

A paper "On Statistics of Vaccination and Mortality from Smallpox in the city of Mexico, 1872 1895," was read by Dr **Jose Ramirez**, who said that vaccination met with no opposition in Mexico, where it was compulsory, and consequently smallpox had become very rare, the epidemic outbreaks occasionally occurring being due to foreign importation A paper "On Drunkenness a Vice, it should be so treated," by Dr **A Nelson Bell** of Brooklyn, N Y This paper advocated the punishment of voluntary drunkenness as a misdemeanor, with increased penalties for repitition of the offense against society "Municipal Cattle and Meat Inspection, by Dr **Peter H Bryce** of Toronto, "The Prophylaxis of Scurvy in Prisons by Pulgue," by Dr **Francisco Martinez Baca**, of Puebla, Mexico Vice President **Woodhull**, in confirmation of the statement of Dr Baca, said that the use of the maguey juice had long been known to medical officers of the army serving in the Mexican frontier as an excellent remedy for scurvy

The following papers were presented "The Relation of Noises to Public Health," by Dr **William C Krauss** of Buffalo, N Y, "The Degeneration of the Human Animal Through the Nursery and Schools," by Dr **J B Learned** of Massachusetts, "The Importance of Supplies of Pure Water," by Dr **J L DeHart** of Brooklyn, N Y, "Racial Deterioration," by **Lawrence Irwell**, M A, of Buffalo, N Y, "The Protection of the Innocent from Gonorrhea," by Dr **Ferdinand C Valentine** of the city of New York "The Necessity of Isolating Beds in Hospitals by means of Windows between Them,' by Dr **Jesus E Monjaras** of San Luis Potosi, Mexico "Filth Deposits with Regard to Public Health," by Drs **Jose D Morales** and **R E de Guerrero** of Mexico

The program having been concluded, Medical Director **Gihon**, United States Navy, rose to say that he had deferred to the last to make formal announcement of the recent death of two of the most distinguished members of the body, Dr **Joseph M Toner** of Washington D C, one of its founders in 1872 and its second President (1875), and Dr **Jerome Cochran** of Mobile, Ala, State Censor of Alabama and senior member of the Advisory Council who since 1878 had never failed in his attendance at the meetings when that was possible and who until a few weeks ago anticipated with great pleasure being with us at Buffalo, and offered a resolution of sorrow and regret, which was adopted by a rising vote After appropriate valedictory remarks, the President at 2 P M declared the twenty fourth meeting adjourned

An excursion around the harbor and an exhibition drill by the life saving service during the afternoon, and an excursion on the following day to Niagara Falls, by steamer on the Niagara River to Chippewa, by trolley along the Canadian bank to Brock's monument and Queenston Heights, by boat across the river to Lewiston, thence by trolley through the gorge to Niagara Falls, where dinner was served, and back to Buffalo by train closed one of the most interesting and successful meetings in the history of the Association

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Second International Congress of Gynecology and Obstetrics

(Continued from page 761)

The discussion of pelvic suppurations showed that the conservative operators were in the majority Doloris (Paris) remarked that the fact which established with the most certainty the evolution of the subject under discussion was the return backward "We have been sliding down an incline at a dizzy rate, and we are now working our way back " This is indicated by the more general adoption of vaginal incision The success of this simple and familiar operation augurs the adoption of still simpler methods and promises to restore early uterine therapeutics to its true importance Anterior vaginal celiotomy is a more recent but valuable conservative process Since we find that pregnancy occurs sometimes even after double lesions, conservative processes have acquired a new importance The conservative tendency which has been manifested at the Congress is logical and bound to assert itself more and more After mentioning that the severest and most virulent processes rarely generate pus, and that about 40 per cent of pelvic suppurations contain a sterile fluid without pathogenic action, he described the unreliability of the symptoms upon which we have to base our diagnosis and concluded with the assertion that the treatment of pelvic suppurations is akin to the treatment of pelvic inflammations, and should follow the same general and absolute therapeutic rules, beginning with simple methods and proceeding to others as may be found necessary What we most need is better knowledge of the evolution of pelvic inflammations, especially of salpingo ovaritis, as this is the most frequent, the cases tending naturally to recovery with a series of recrudescences, gradually subsiding in intensity, and those in which the acute attacks extend beyond their usual term with complications that involve the general health, or when the lesion becomes permanent and some etiologic factor is discovered, tuberculosis, syphilis, arthritism, neuropathy, alcoholism, etc He asserted that no real information is to be derived from the statistics of radical operations performed without any preliminary conservative treatment, and emphasized that the only treatment for pelvic suppurations was to try the simplest means of cure first and only proceed to sacrificial measures as a last resort

Doederlein (Leipsic) considers that if there is pus in the tubes or ovaries total ablation of the diseased organs is the only chance of cure But the uterus and ovaries may be left in certain cases He prefers Pean's operation when the entire genitalia have to be removed, but when the pus has disappeared, anterior and posterior colpo celiotomy may be preferred, as this in some cases allows a radical operation

Segond (Paris) spoke in high terms of the American method, which allows the total ablation of the uterus and its adnexa with "veritably marvelous security,' as he ascertained for himself by watching the American surgeons at work He has also performed it himself recently, with success each time He called attention to the importance of liberating the cervix as a preliminary to vaginal hysterectomy, whether it is amputated later or not The cervix free, the broad ligaments can be sectioned at the base As these are the only obstacles to the descent of the uterus, the *fundus* can be seized at once Liberating the cervix also lessens the dangers of injuring the ureters

Henrotay (Antwerp) stated that gonorrhea is by far the principal cause of suppurated adnexa and that the majority of cases now called puerperal, are really due to gonorrheal infection Prophylactic treatment should be based on the extreme severity of gonorrheal affections in women and the obligation of physicians to fully inform every man with acute or chronic urethritis of this fact Medical treatment s [illegible] in every case where possible If an operatio [illegible] prefers the vaginal method, and adds that th [illegible] of the lesion renders total castration imperative He considers closing the vaginal vault and the pelvic peritoneum a marked improvement in technique, and that it should be done in every case unless there is some special contraindication

Jacobs (Brussels) prefers posterior and anterior colpotomy in cases of extraperitoneal cellulitis, and uses the thermo cautery to make the incision, thus avoiding infecting the vagina with the pus which escapes and may cause post operative accidents In performing hysterectomy he substitutes ligatures for the forceps, and since he has done this he has had no post operative intestinal occlusion nor peritonitis Drainage is not required after a radical operation, except when pus has escaped into the peritoneum

Acconci (Genoa) prefers vaginal hysterectomy when the indications allow a choice

Coromilas (Calameta) reported a case of pelvic suppuration caused by malaria and cured by quinin

Laroyenne's method of vaginal *débridements* was described by him and its advantages confirmed by Adenot It is more conservative than laparotomy or hysterectomy, while it reaches pus sacs inaccessible by any other method, and makes an opening large enough to empty them and keeps it open long enough to be really effectual Laroyenne's trocar invented for the purpose is convenient and sure, but is not absolutely necessary Doyen compared his operation with Péan's with an argument for its superiority It consists in opening the posterior peritoneal cul de sac, and freeing the posterior surface of the uterus from the adherences, if there are any, and then extracting the organ by inverting it to the vulva, after median hemisection of its anterior wall, afterward extracting the adnexa Hemostasis is unnecessary during the course of the operation, and forcipressure of the broad ligaments is only required afterward, and above the adnexa (The *Bulletin Medical* of September 6, describes the Doyen method in detail)

Reynier appealed for a more rational and eclectic treatment, based upon the indications, which should be more definitely established His record since 1891 is 200 operations for pelvic suppurations In four cases, with four recoveries, he opened the pus sac by the inguinal and subperitoneal route for phlegmons of the broad ligament after childbirth In 110 cases he opened the abdomen, with 9 deaths, 7 from peritonitis, 1 from shock and 1 from hemorrhage He has performed vaginal hysterectomy 52 times, with 6 deaths, 1 from hemorrhage, 1 from shock, 2 from intestinal occlusion, and 2 from peritonitis In 46 cases he opened and drained the pus sac through the posterior cul de sac, with no deaths, but in 9 cases consecutive hysterectomy was required and laparatomy in 4 His experience has convinced him that almost all pelvic suppuration can be approached by the abdomen, and that our methods of draining render the danger of infection much less than the hysterectomist extremists are willing to admit In case of a young woman with symptoms of recent infection and evidences of pelvic suppuration prominent in the vaginal region, he first makes an incision in the posterior cul de sac with large drainage If in spite of this, the phenomena of infection continue, he completes the operation with a hysterectomy if the uterus is diseased, but if not, he prefers a laparotomy His indications for primary hysterectomy are uterine abscesses opening into a neighboring cavity, especially into the rectum Also old salpingo ovaritis, with pelvi peritonitic complications which have produced a diffuse mass walling in the uterus, and also for fibromatous uteri complicated with pus in the pelvis In other cases he is inclined to prefer laparotomy, especially in cases of doubtful diagnosis

Pichevin (Paris) has found sclerotic lesions in removed retrodeviated uteri, and has also produced similar lesions in rabbits in ths same way

In discussing the question of surgical treatment of retro deviations of the uterus, all seemed to agree that massage and the pessary should be tried first, and the metritis and all other complications receive careful preliminary treatment, which often puts an end to the displacement without an operation Polk (New York) disapproves of fixation, and restores the uterus to position by shortening the round ligaments through an opening in the anterior vaginal cul de sac He sutures the ligament a certain distance above its base, with its peritoneal covering, to the uterus on a level with its base, leaving a couple of loops One of these he sutures to the uterus, and the other to the ligament above the first suture At the same time he shortens the sacro uterine ligaments when necessary, through a transverse opening in the posterior cul de sac, at the utero vaginal insertion A strong silk suture is then placed at each sacro uterine ligament at a median point, the ends brought through the vaginal wall at the extreme corners of the incision and tied firmly together, catgut closing, drain removed in fifteen days, patient kept in bed three weeks, no pessary but supervision of urinal and intestinal functions and ventral belts for patients with prominent abdomens

Pozzi (Paris) proposed to substitute the term "excessive movability" for movable retrodeviation He treats it with the pessary and hypogastric belt, curing the metritis (curettement, amputation of the cervix, etc) and restoring rents in the peritoneum by an extensive plastic operation He considers a retrodeviation with adherences a secondary symptom, and treats it by finding and removing the diseased tubes or whatever the cause may be

Byford (Chicago) outlined his cysto hysterorrhaphy as a T-shaped incision in the anterior wall of the vagina, separation of the adherences, suture of the fundus to the vesical peritoneum, shortening the round ligament through the vagina and closing with transverse sutures that draw the tranverse incision into the median line

Schmeltz (Nice) prefers anterior colporrhaphy (simple incision in the mucosa, enlarging it with the fingers), combined with hysterectomy (ligatures) and perineorrhaphy

Jacobs (Brussels) reports four successful pregnancies in twenty one cases treated by fastening the anterior uterine wall to the upper part of the peritoneum of the anterior vaginal cul de sac He announced that the later results of other operations, inoffensive in themselves, may prove very dangerous and exhibited some pedicules that had formed between the abdominal wall and the uterus causing death from ileus, etc

Engstroem (Helsingfors) reports eighteen ventro fixations of movable retro deviations and thirty four of fixed All successful A single suture is passed through the abdominal wall, the peritoneum and the fundus This leaves the uterus with almost normal movability

Hartmann (Paris) has found that the development of the fetus brings the pregnant uterus into place, assisted by vaginal manipulation, except where there are adherences between the bladder, omentum and rectum, which require laparotomy, but such cases are rare

Mangin (Marseilles) has failed with the Alexander or Nicoletis operation alone, but has been successful every time when they were combined with plastic operations His advice is, first, pessary for movable retrodeviations This failing, vaginal colpo hysteropexy with plastic operation on the vagina He limits the Alexander and abdominal hysteropexy to patients with non resisting tissues Complications must be cured with medical treatment, plastic operations, etc , as may be necessary, and if the condition of the appendages requires it, laparotomy when the lesion is single, hysterectomy if double

The majority of speakers deprecated the use of fixation, as it rendered after pregnancy so dangerous, especially vagino fixation, although the operation is a good one after the menopause Doyen's method of treating painful retrodeviations differs from all the preceding and, as he claims, has none of their disadvantages He performs the Alexander operation and also shortens the anterior uterine wall, thus avoiding the dangers of suspending the uterus from any one point, and limiting the operation practically to the uterus itself The cervix is seized with two clamp forceps, as if for a hysterectomy, and drawn down to the vulva The uterus in this position, an incision is then made in the interior cul de sac of the vagina, the bladder is detached and an opening made into the anterior cul-de sac of the peritoneum A silk thread is then passed transversally through the superficial coat of the fundus with a special needle holder The other end is fastened in the lower part of the subvaginal portion of the cervix This ligature shortens the anterior uterine wall and draws the organ into an upright position without interfering in the least with the direction of the cervical passage A second ligature is made above it to strengthen it, and the vaginal wound is closed with a silkworm gut, the two ends simply held by a rubber tube The entire operation requires only five or six minutes It is completed by shortening the round ligaments 8 to 10 centimeters, through an incision into the anterior wall of the inguinal canal

Reynier performs hysteropexy by putting his threads into the broad ligament, and passing them under the uterine insertion of the round ligament, fastening them on each side to the abdominal wall In every case the uterus has retained its position

Schwartz (Paris) reports several successful pregnancies after his hysteropexy After preparing the patient for laparotomy and introducing a Hegar bougie (6 or 7) into the uterus, held in place with a cotton tampon, he incises 4 to 5 centimeters, and explores with his finger the condition of the appendages, while an assistant straightens the uterus by gently pushing up the bougie into it After the adherences are detached, a silk thread (No 2 or 3) is passed through the uterus below the emergence of the two tubes The loop thus formed serves to draw the uterus up and allows two or three other threads to be taken below it, avoiding the vesical cul de sac, and keeping as far from it as possible If the appendages are diseased, they are ignipunctured, resected or removed, before the threads are fastened, after being passed on each side through the entire thickness of the wall, except the skin and the subcutaneous cellular tissue Separate threads close the peritoneum, the teguments, and the muscular aponeurotic planes He has only had two relapses, one of them after confinement, two still suffer pain, thirty are definitely cured

SELECTIONS

A Case of Compound Protozoan and Bacterial Infection—The patient, A J , was a Pole about 29 years of age, from whom a satisfactory history could not be obtained He had been living in a malarious district since March of the past year (1895) but he had been quite well until three weeks prior to his entrance, which was on October 21 His illness began with diarrhea, which rapidly assumed a severe character, the movements containing much blood and mucus During these three weeks he stated that he had several times experienced slight chilly sensations and also felt feverish On entrance to the hospital he was very anemic, extremely sallow, had a palpable spleen, slight fever and severe dysentery, the movements showing much blood and mucus The dejections contained many motile amebæ having the appearances of the ameba coli The blood examinations showed hyalin bodies and crescentic and ovoid pigmented forms of the malarial parasite Under the administration of five grain doses of quinin every three hours the temperature fell The diarrhea was treated with irrigations of quinin (1 1500) repeated twice daily, but without apparent effect The patient continued to lose blood per rectum and died on November 2

The *autopsy* was performed seven hours post mortem Body of a moderately strongly built, much emaciated man The surface presented a distinctly sallow hue The mucous membranes of the mouth and conjunctivæ were extremely pale The abdomen was moderately distended, the subcutaneous fat almost absent, the muscles dark brownish red in color

The peritoneal cavity—The omentum was well spread out, covering the intestines, but it presented an opaque appearance and was covered with a sticky exudate The loops of the moderately distended small intestine were glued together by a similar sticky exudate The serous membrane itself was in places vividly injected In the fossæ small accumulations of fluid containing flakes of fibrin were encountered The omentum was adherent along its lower border to the much enlarged and inflamed appendix vermiformis The appendix lay anterior to the cecum and between it and the anterior abdominal wall, it was provided with a mesentery which reached within 3 cm of its tip, and at the termination of this the appendix was bent sharply upon itself, giving rise to a right angle The distal 3 cm of appendix was the least dilated part, the remainder had the thickness of the index finger and presented in addition three bulbous enlargements, which on section were found to correspond to areas of necrotic tissue The whole was embedded in a sticky, opaque exudate

Intestines—The large intestines were greatly distended The sigmoid flexure was of rigid consistence and projected beyond the pelvic brim Within this portion for a distance of 2x5 cm the serous coat was infiltrated with blood and presented a necrotic appearance On opening the large intestine the entire mucous membrane was found in a frayed and sloughing condition, opaque, everywhere infiltrated with gelatinous pus and evidently necrotic The necrosis seemed to extend far beyond the mucous coat and to involve the deeper layers The walls, as a whole were very much thickened In many places coagula of blood were discovered Amid this general necrosis and sloughing more circumscribed ulcerations existed, some of which seemed to reach to the peritoneal coat These in particular were surrounded by thickened and purulent margins, and at times they definitely undermined the adjacent tissues The ulcerations and sloughing extended from the rectum to the cecum, involving the whole of the latter, penetrating into the appendix, but ending abruptly with the ileo cecal valve The small intestine was entirely free from ulceration, and it showed throughout nearly its whole extent, although most prominently upon the crests of the valvulæ conniventes, a slaty pigmentation The duodenum was more pigmented than other parts of the small intestine

The *spleen* was enlarged, weighed 380 grams, its capsule was wrinkled, and on section it presented a bluish black color In consistence it was almost diffluent The Malpighian bodies appeared enlarged, the pulp increased

The *liver* weighed 2100 grams, its color was dark and slaty Small grayish white nodules could be seen on section, which varied in size from a pin point to a hemp seed The larger ones could easily be made out to be abscesses, the contents of which were opaque, gelatinous and pus like The wall of the *gall bladder* was thickened and infiltrated with a similar exudate to that covering the peritoneum The mucous membrane was, however, intact The remainder of the organs exhibited no remarkable lesions

Microscopic examination of the fresh specimen—Attention was first directed to the study of the exudates for amebæ, and for this purpose pus, *a*, from the peritoneal cavity, *b*, from the intestinal contents, *c*, from the liver abscesses, was employed The most painstaking search failed to reveal amebæ in the pus from the peritoneal cavity, while on the other hand many typical living and moving amebæ were discovered in the pus from the ulcers in the large intestine and the intestinal contents and a smaller number in the contents of the liver abscesses

The exclusion of amebæ from the peritoneal exudate led next to the staining of cover slips for bacteria By the use of ordinary staining agents (gentian violet, methylene blue) myriads of capsulated diplococci resembling the micrococcus lanceolatus were revealed The contents of the liver abscesses, stained in the same manner, failed to show any bacteria whatever The microscopic examination of the abscess contents indicated that fewer pus cells and more necrotic and disintegrating liver cells composed these than in ordinary abscesses, thus recalling the fact pointed out by Councilman and Lafleur in their monograph on amebic dysentery, that true suppuration is not caused by the ameba dysenteriæ

The source of the bacteria found in the peritoneal exudate and which evidently were the cause of the acute peritonitis, was sought in the intestinal contents, where, as is well known, they are not infrequently contained, and from which source, as we have previously pointed out, they may invade the peritoneum and set up a fatal peritonitis The condition of the appendix vermiformis, which arrested attention from its swollen and necrotic appearance, was believed to have led to the escape of the microorganisms in question Upon closer examination it was found that corresponding with the dilatations previously described, the entire wall was in a necrotic condition The ulcerations themselves reached deeply into the inner coats, but did not penetrate all the coats The lumen of the swollen appendix was filled with yellow, gelatinous pus quite resembling that found in the peritoneal cavity itself Cover slip preparations showed many encapsulated diplococci besides several kinds of bacilli The former much predominated in numbers

Malarial bodies were not numerous in smear preparations from the organs, although pigment was abundant However a few undoubted ovoid bodies were found in the smears from the spleen and bone marrow

Cultures—Petri s plates were made from the blood in the heart the exudates and all the organs upon from the *heart's blood, spleen, lungs* and *liver abscesses* showed no growth after having been kept at the temperature of the thermostat for forty eight hours

Peritoneum —The plate was crowded with colonies, apparently of two kinds, which, owing to the large numbers, probably did not reach full development The larger colonies consisted of bacilli which were identified and shown to be the bacillus coli communis The smaller colonies (predominating) were made up of oval diplococci which were shown (cultures and animal experiments) to be the micrococcus lanceolatus The plate made from the *bile* contained 7, from the *liver* 30 colonies of the bacillus coli communis The plate from the *kidney* was crowded with colonies of the colon bacillus, among which a few smaller colonies of diplococci were found, these being the micrococcus lanceolatus

Histologic examination —The microscopic examination of the hardened tissues was confirmatory only of the features of the case as already described Nothing new was discovered As regards the malarial pigmentation, the dark pigment was found especially in the liver and spleen (bone marrow not studied), and in these organs in the usual situations The parasites themselves were very difficult of demonstration The lesions in the large intestine caused by the invasion of the amebæ were perhaps the most interesting The necrosis, it was found, extended into, but for the most part not through the innermost muscular tunic, but it was surprising to what extent the mucous membrane might be dissected away from the submucosa without losing its vitality Not a small part of the frayed appearance presented by the large intestine was produced by this partial dissection of the mucous coat The bases of the ulcers proper were formed for the most part by the circular muscle, which was itself infiltrated with inflammatory products, cells, serum, fibrin The inflammatory infiltration extended into the depths of the tissue, often to the serous coat, and spread laterally for a great distance It seems probable that the ulcers in the appendix originally were caused by amebæ, and that subsequently the extension of the necrosis to the serous surface was the work of the micrococcus lanceolatus

Amebæ apparently were abundant But, just here it is proper to state that in the hardened tissues it would be easy to be led into error in regard to the significance of many of the ameba like cells present From a study of the transitions of connective tissue cells and their progeny in the chronically inflamed parts, it is quite certain that many of the bodies resembling amebæ are swollen and degenerated (fatty or vacuolated) tissue cells These, too, often lay in definite spaces, and they were found in the submucosa and muscle and within small veins Without the proof supplied by the examination of the intestinal contents during life and at the autopsy, one must have remained in doubt as to the presence of amebæ among these elements

The kidneys showed a moderate degree of parenchymatous degeneration In addition to this, emboli of liver cells were detected in branches of the renal vein Similar emboli were discovered in the central veins of the liver lobules not infrequently Lubarsch has reviewed the literature upon the subject of "parenchymcell emboli" It appears that liver cell emboli are either of traumatic or of infectious (or due to intoxication) origin There is no definite relation between the extent of the injury and the occurrence of such emboli The transported liver cells, besides being found in the veins of the liver, occur in the heart, pulmonary arteries and branches of the renal and hepatic arteries Among the infectious diseases liver cell emboli are found very often in eclampsia and chorea In eclampsia they are found very often in the arteries of the lungs and brain and in the renal veins, in chorea in the hepatic artery and branches of the portal vein (patent foramen ovale) Where hemorrhage, necrosis and softening exist, liver cell emboli are encountered Thus they have been found in scarlet fever, in softening of hepatic gummata and in liver abscess The transported liver cells have been found followed from the hepatic veins into the coronary, renal and other arteries Their occurrence in veins—renal and cerebral—is attributed to retrograde embolism for which a high degree of venous stasis, such as occurs in eclampsia, has been assumed Evidence of such stagnation is wanting in our case On the other hand the disintegration of liver tissue such as has been found in other cases, is supplied by the abscess formation and circumscribed necrosis in the liver Lubarsch states that the conveyed liver cells may persist from three weeks to two and one half months, but evidences of proliferation have never been observed —Reported by Dr Simon Flexner in *Bul of the Johns Hopkins Hospital*, September and October

Foreign Bodies in the Esophagus —Dr Carl Beck of New York in the *Clinical Recorder* argues for an earlier employment of surgical treatment in these cases His experience shows that valuable time is generally wasted by the administration of emetics and covering (einhullende) substances, such as soft bread or hashed potatoes, until even successful removal by surgical procedures is not able to prevent the fatal outcome any more It is justifiable to attempt once to remove the foreign body by administering an emetic But if this *one* effort fails, either extracting or pushing down should be done without further delay All bodies which can either be seen or which can be felt by finger or explorer, within the pharynx, must be extracted If the body has passed the isthmus, it has to be pushed down into the stomach, sharp edged bodies, however, like splinters of bone or wood, needles, pins, etc, to be excepted Repeated attempts should be made to extract such bodies also, because they may perforate into important blood vessels or the trachea, or may cause fatal abscess formation The best instrument to be employed for such purposes is a so called "coin catcher," which consists of a long flexible sound made of whale bone To one of its ends a piece of sponge is attached for the purbose of propulsion toward the stomach, on the other end is a grooved metal ring By passing the foreign body first with this grooved ring and then withdrawing it slowly, at the same time turning the instrument slightly, the body is caught in the groove in the great majority of cases The coin catcher is introduced best after having it lubricated with the white of an egg The patient's head is thrown back so as to bring the axis of the mouth and pharynx in line with the esophagus (just like the juggling sword swallowers) The location of the body will then be indicated by the stoppage of the instrument If such methods of fishing up or pushing down do not avail, esophagotomy must be performed without delay Herniotomy does much less harm to a strangulated gut than a prolonged taxis, and the same principle and view applies here Esophagotomy is by no means a difficult operation, if only the principle is obeyed to operate with blunt instruments After having introduced a sound into the esophagus from the mouth as a guide an incision is made alongside the left anterior margin of the sterno cleido mastoid muscle Then the tissues containing the carotid and jugular and the pn vagus, together with the ramus descendens of the hypoglossus nerve can be separated without any cutting by the use of the Cooper scissors and then be retracted with blunt hooks Now it is easy to feel the sound, previously, and to incise on it After the foreign body is extracted with a suitable forceps, a sharp spoon sometimes also being useful, the wound is but partially closed and the remainder packed with iodoform gauze At the New York German Medical Society (see *New York Medicinische Monatsschrift*, April, 1892) Dr Beck presented a case of a girl, 18 months of age, in whose esophagus a quarter of a dollar piece had remained for four weeks and which he could extract by the coin catcher, the patient making a good recovery But such cases are only the exception Repeatedly he has seen cases in which all the various means of extraction and propulsion were tried, and only after much valuable time was lost esophagotomy was resorted to But the extraction then would not avert septic inflammation and its consequences (broncho pneumonia, etc) The Roentgen rays seem to have started a new era in the location of foreign bodies in the esophagus, so that they will not remain unnoticed any more, and are no longer confounded with phthisis pulmonum, croup, bronchitis, asthma, etc J W White (*University Medical Medicine*, June, 1896) could get a definite information by the rays in a successful case of a girl, 2½ years old, which had swallowed a jackstone the location of which being such that gastrotomy appeared to be preferable to esophagotomy

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SATURDAY, OCTOBER 17, 1896

THE TREATMENT OF INSANITY EIGHTEEN CENTURIES AGO

Nowhere in science is the truth of TENNYSON, that

> "The course of time will swerve,
> Crook and turn upon itself in many a backward
> streaming curve"

better illustrated than in medicine All great medical discoveries seem upon the point of being made long ere the culmination of facts places them beyond destruction by inertia and conservatism Anesthesia, the germ origin of disease, antisepsis and multitudinous "late" discoveries were discernible for centuries in medical works ere the nineteenth century placed them in the rank of commonplace facts This is peculiarly true of psychiatry, whose essential principles were outlined eighteen centuries ago Much suffering might have been saved the hapless insane and much misfortune to the medical profession been avoided had these principles then outlined been adopted in the main According to SORANUS (A D 95, whose writings are recognized as those of CÆLIUS AURELIANUS, his translator), it is useless to examine into causes, as different causes may produce analogous effects It is only necessary to know the results in order to apply suitable remedies He was decidedly averse to violent emetics and purgatives He everywhere manifests the fear lest inflammation should be augmented by the strength of the remedy He advises frequent exercise, warm fomentations, inunctions, cataplasms, fumigations, frictions, diet, baths, leeches and cuppings He recommends great attention to the character of the air, whether moist or etc He rejects all empiric medication and fetichistic formulæ The maniacal should be placed in rooms moderately light, of a moderate temperature and whose tranquillity should be uninterrupted by noise No painting should ornament the walls The air should come in by elevated openings The patients should be placed on the ground floor rather than on the upper story, as most of them are disposed in their paroxysms to cast themselves down Their beds should be solidly fixed and so disposed that the patient may not see persons entering, nor be irritated by a variety of figures If they be so agitated that it is not possible to give them aught to lie upon except straw, this should be well selected, prepared and stripped of everything hard, in order that it may be mild and not disagreeable to the touch If some parts of the body have suffered from the movements of the patient, use warm applications and fomentations of oil mixed with decoctions of fenugreek, mallow or flaxseed Frequent passing in and out should be forbidden Sometimes use an intentional indulgence and sometimes a slightly severe reprimand, with an explanation of the advantages occurring from a better course of conduct If agitated difficult to restrain, or irritated by solitude, it is necessary to have supervisors who should be ordered to master the patients without their perceiving it, approaching as if to make friction in order never to provoke them, if the sight of men irritates, and only in very rare cases he employs ligatures, but with the greatest precaution, seeing that the bonds are of a soft, delicate texture Means of repression employed without discretion augment and even create fury instead of lulling it (GALT's Insanity, 1846) If they have fear and respect for any one person they should not see him often, frequent visits compromise such an ascendency But when they resist the wishes of those around them it is necessary to recur to his authority If light excites them, their eyes must be deprived of it, though not the rest of the body

Abstinence is suitable at first and recourse to bleeding if the strength permits If no contraindication exist it should be repeated from time to time One of the best means of appreciating the degree of the strength is drawn from the state of the pulse which the physician must observe whether it is strong or feeble SORANUS should commence feeding with great precautions and not permit any except very light diet of easy digestion The patient must be thus nourished during the decline of the affection Injections must not be neglected if the evacution be not regular in a great number of cases the belly should be covered with emollient cataplasms which descend to the pubis in ord [illegible] may [illegible] any pain which the he [illegible]

Physi [illegible] s should [illegible] nd have ence of moral impressions, gay ideas and those things causing some relaxation of mind If the disease remains stationary he shaves the head Scarifying cups should be applied in turn to the breast and between the shoulders as connected with the head But these applications ought not to be too near the head nor too largely made, as calling the blood in this quarter, etc Leeches may be placed on the forehead or the temples, taking care to favor the flow of blood by cataplasms of emollient substances or sponges dipped in water If the symptoms persist, the same means must be used the second or third day and as often as necessary If the parts covered by the cups and the leech bites be painful they should be moistened either with oil or a decoction of mallow, etc If the disease arise from fatiguing overwatching, it is necessary to have recourse to rides upon a bed suspended or upon a chair carried along or even upon enlaced hands The monotonous noise from the continual fall of a small current of water from a height has good effects Application of warm sponges upon the eyelids is also useful When the paroxysm declines it is necessary to give more varied aliments, moderately strengthening when they have regained their strength

Exercise is then especially beneficial They must, also exercise the voice They should be made to read writings containing faults, which often at the same time have the advantage of exercising the mind in the correction of imperfections in style These writings should be of easy comprehension The physician should converse with them, asking questions without fatiguing them Recourse should be had after reading to theatrical performances, the recreation from which will diminish a sadness ready to awaken, or frivolous fears ready to reveal themselves At a more advanced epoch of treatment, occupy the patients with weighty meditations and discussions in order to give their mind its full capacity, but with the precaution that the commencement of the subject treated should be without warmth, that the narration, on the contrary, and the demonstration should be clear and complete, should solicit an animated utterance and that the epilogue should be brief and careless His hearers should give the patient their benevolent approbation After this exercise they should promenade or have their bodies rubbed As to the unlettered the physician should discuss with them matter only relative to their conditions He should speak to the laborer concerning agriculture, to the mariner as to navigation If we have to act with a man ignorant of everything he should present very general subjects or a series of numbers Physicians are able in truth to find suitable nourishment for all sorts of minds, but above all should agreeably complement the patient Annointing and frictions which have been recommended should be made at first upon the shoulders and on the neck, commencing lightly, then more strongly afterward on the head, after which a bath The nourishment should become more and more substantial After beans, herbs, then fish, the brains of different animals, an easily digested aliment, then little birds The larger kind later as thrushes and young pigeons There should be even more reserve as to the hare and the roebuck

Physicians should grant a little weak and light wine, at first every five days, then four, three, even until every day When no new symptoms occur and the patient has become much less impressible, change of air will be of great advantage Voyages by sea or land, distractions of all sorts, recreation of the mind, agreeable, affectionate conversations will produce an excellent effect, for if ennui and sad feelings act on the sane, how much will they influence the scarcely cured? The convalescent, should he desire it, can hear the precepts of the philosopher They often dissipate sadness, fear and excitement and may contribute powerfully to the reestablishment of health If the malady really persists and not merely some of its symptoms, a return is counseled to the previously mentioned means, to exposure of the body to the heat of the sun, the head only being free from its action, to sinapisms and to violent exercise of different kinds

Soranus combats his predecessor's recommendation of darkness in all cases, because it may suit one and not another, and their recommendations of an immoderate abstinence without exception, because this may sometimes throw the patient into fatal feebleness and prevent the use of means otherwise suitable They seem, he says, to consider their patients as ferocious beasts to be lulled by hunger and thirst, and led by the same error they wish to chain them cruelly, not considering that it is more convenient and easy to restrain by the hands of men than by violence and the lash, a deplorable treatment which can but aggravate their condition and make bloody their limbs and offer the sad spectacle of their misfortune at the moment in which they regain their intelligence By medicaments, as the poppy, they provoke a morbid torpor instead of good sleep They rub the head with oil of roses, etc , and excite organs needing relaxation They make little judicious use of cold, ignorant that it is often excitant They employ irritant clysters and thus produce dysenteries They counsel drunkenness and love, which are causes They prescribe music as a routine, whereas it sometimes excites The generative act should not be permitted to the insane The repression of their desire may sometimes agitate them, but they are oftener found to be worse after coitus His treatment of melancholia has been indicated in what has been said of mania

This treatment of insanity was far in advance of that practiced in Europe in the first decades of the present century, or that of Cook County in 1871, of Auburn (N Y) in 1876, of Anchorage (Ky) in 1882 and of 1896 by the Hahnemanniacs at the Norfolk (Neb) Insane Hospitals Whips, violence and excessive restraint were the therapeutic methods employed at these institutions, not spasmodically or furtively, but on a settled principle Soranus, long ere Pinel, Rush, Tuke, Conolly or Gardner Hill, seems to have grasped in the main the true principles of psycho-therapy

THE PROGNOSIS OF MANIA AND MELANCHOLIA

The common notion taught in all text-books and held as one of the axioms of practical psychiatry, that mania is the most hopeful and curable form of mental disorder, will receive a severe blow from the lately issued fifth edition of Kraepelin s "Psychiatrie " The author of this volume, one of the best known and admittedly one of the ablest of German alienists, has very largely remodeled his work, and it contains the latest and fullest results of a very wide experience, estimated with a thoroughly critical and competent judgment His conception of mania is not essentially different from that generally accepted by authorities on mental disease, but he does not recognize it as an independent entity in his classification All cases, according to him, especially those in the earlier and middle periods of life, before the downward slope of life has been reached, are properly to be referred to the periodic insanities, they are not single, isolated attacks of a disease that may never be again suffered from, but are indications of a constitutional disorder, sure in time to recur He bases this opinion on an observation of a thousand cases carried over a great many years, and in all these he has found but one in whom the disorder did not recur and that is not in support of the view stated above A single exception in such a series only proves the rule, and so far as known no one has ever followed up as methodically and carefully the after-histories of his patients as Kraepelin seems to have done It has been a matter of general experience that an attack of mania was perhaps, as we may say, one of the least self protective of disorders, that a second attack was very liable to occur after a variable lapse of time but few, if any, had before been led to generalize from these facts that it is properly to be reckoned a periodic disease Kraepelin himself admits that the interval of mental health may be long—ten years or even more in some cases—but he claims none the less the validity of the rule he has laid down that recurrence is inevitable, sooner or later

It may be thought, perhaps, that this is merely a change in the point of view, that the facts are the same, but that they are differently estimated by him from those who have written before It is, however, really much more than this if we accept Kraepelin's views, our prognosis of mania and of the so called simple insanities generally is completely reversed, instead of being the least, they are to be counted amongst the most formidable types of insanity as regards the future of the patient What is true of mania is true also in regard to melancholia, which he classes amongst the mental disorders of the period of involution when it occurs in early life it also falls in his system into the periodic insanities

How generally Kraepelin s views will be accepted is an interesting question His authority is certainly of the highest, and his method by which he reaches his conclusions, the careful and thorough research into the after-history of his patients, gives them the very greatest weight The fact that he was able to follow the careers of a thousand cases of mania after discharge shows the range of his clinical observation far exceeding the possibilities with many of his less favored co-workers in this department It will be, nevertheless, with something of a strain, that alienists will give up their time-honored views to take up others, new and altogether different from those they have been accustomed to hold The publication of these, however, will undoubtedly excite fuller anamnestic research in all quarters, and thus prove a most valuable stimulus for work in a direction that has perhaps been hitherto too much neglected It will also lead to a more careful diagnosis and scrutiny of individual cases, and the separation of the exhaustion and toxic types from those that fall more properly under the class considered by Kraepelin There is no doubt at all that cases of confusional insanity are very often diagnosed as mania, as pointed out by Dr W L Worcester, and the same is true of the post-febrile, toxic and exhaustion deliriums Excluding these, it may very possibly be true, as Kraepelin holds, that mania and melancholia are indications of constitutional taint and incurable disorder

THE SMOKE NUISANCE, A FABLE

The editor of the *Glasgow Sanitary Journal*, August, seeks to show in fable that the abolition of smoke nuisances is a possibility He places his chief reliance upon the developments of science, giving experience the go-by, saying

One day Experience, Inexperience and the Scientific Mind met at a congress and shook hands They began talking about the weather

"What a beautiful morning!" exclaimed Inexperience

"Wind in the north, said Experience "It will be rain by evening '

"Then we shall see the rainbow,' said the Scientific Mind

"I wonder said Inexperience, "when we shall control the weather, like the man in Rasselas

"Never," said Experience "The thing is a demonstrated impossibility

"And yet ' gently, as to himself, said the Scientific

Mind, "but yesterday I first spoke to the antipodes, but to-day I listened to the stored voices of my dead, but even now, I have seen with these eyes the cast shadows of the skeletons we are within the flesh To-morrow, what shall I not see and hear?"

"Yes, yes," said Experience "The telephone, the phonograph, the X rays, and all that But that sort of thing can not go much further, there is not much more to know, else we should know it"

"On the contrary," said Inexperience, "we know nothing yet, comparatively"

"*You* speak for yourself," said Experience

"For us all!" said the Scientific Mind, humbly

"How?" inquired Experience, surprised

"As thus," said the Scientific Mind "Glasgow is sick with fog, which is a cloud, which is the rain Why? Glasgow burns coal, which is smoke, which makes the fog blanket, which slays the sunlight, which is health"

"That's old news," said Experience "But what do you propose to do?"

"Burn coke," said the Scientific Mind

"I never thought of that," said Experience

"Of course not," said Inexperience "Who said you did?"

"Think of it now," said the Scientific Mind

So they shook hands again and went their ways

We might add that in all human probability coke was *not* accepted by any considerable number of the people, and the smoke and black fog continue to have it all their own way

A MEDICAL SATIRIST OF MEDICINE

Medicine in France in the seventeenth century was the peculiar theme of satire, probably for the same reason it is a safe mark for newspaper sarcasm to-day The sensation mongers who dare not attack the rupture-curers, advertising quacks, patent medicine men or abortifacient mongers, openly assail medical men on the ground that it amuses the public and does not hurt medical science Precisely the same regard for the sacred cash box prevented the French satirists from attacking the despot Louis XIV and caused his brutal aristocracy and plutocracy to concentrate their venom on the physician Moliere was an expert in this He had a quasi-medical predecessor to whom he was probably much indebted Bertrand Harduin de St Jacques (1598—1648) entered upon the study of medicine at the University of Montpelier For unusually outrageous contempt of the boundaries of property, he was expelled and became first a travelling quack and then naturally gravitated into a strolling player He came to Paris and under a false name, entered the Bourgogne theater troupe where his satire against medicine was so renowned that Moliere, then a youth, was brought to the theater by his grandfather to see St Jacques play The Paris physicians took the satire good humoredly and were often auditors After eight years of Paris stage life, St Jacques obtained a medical degree through the influence of Cardinal Mazarin, and thenceforth practised medicine reputably till his death St Jacques had something of the degenerate in his make-up, for "He was a large brunette with dark sunken eyes and flat frog nose, who resembled a huge monkey and did not even need a mask on the stage, as he wore a natural one"

ANOTHER DONATION TO THE NEWBERRY LIBRARY

Professor De Laskie Miller of Chicago, has given his entire collection to the Newberry Library It was one of the most complete private collections in the city, not made up of periodicals and miscellaneous books, but composed of standard works of all the best authors from the earliest times to the modern, such a collection as a teacher desiring to keep abreast of the times would naturally purchase

The library contains about 600 volumes of carefully selected standard works Those relating to obstetrics and diseases of women and children, are noticeable

Such libraries as these, like keen tools in the hands of the master workman, are valuable as a whole not merely on account of the intrinsic merits of the component parts The books when selected in this way by a skilled hand, have a reference to each other as close and enduring as the inlaid pieces of a Florentine mosaic

But to use books rightly one must know them The elder D'Israeli said that one might as well fill a room with musical instruments and expect to be an expert musician by mere contact, as to expect a man to become a literary man by the mere possession of books And so we must turn to the great libraries for the production of our future literary men, and when the right man, comes in contact with the working collection of a worker in his profession, we may expect great results

WASHINGTON AND HIS PHYSICIAN'S BILL

Physicians who are drawing pessimistic auguries from the difficulty with which collections are made during the present year, may take some comfort from the fact that, on the eve of the first election for President of the United States, the financial difficulty was such as to affect George Washington the Father of his Country, the unanimous choice of his countrymen for President, in the payment of his physician, Dr Craig In a letter to the latter dated Aug 4, 1788, Washington says

"With this letter you will receive the horse I promised you, and which I now beg your acceptance of He is not in such good order as I could wish, but as good as my means would place him I also send you thirty pounds cash for one year's allowance for the schooling of your son G W I wish it was in my power to send the like sum for the other year, which is now about or near due, and that I could discharge your account for attendance and ministerings to the sick of my family, but it really is not, for with much truth I can say I never felt the want of money so sensibly since I was a boy of fifteen years old, as I have done for the last twelve months and probably shall do for twelve months to come

"Sincerely and affectionately, I am yours, etc,
"George Washington"

PUBLIC HEALTH

Typhoid in Columbus, Ohio—All physicians of this city are required to report the presence of typhoid fever within twelve hours after having become advised of it Such is also the rule in cases of smallpox, scarlet fever and diphtheria

The Pennsylvania State Quarantine Board—This Board met in Philadelphia October 5 Dr Boening the State Quarantine physician reported for the month of September as follows Number of vessels permitted up from quarantine during the past month 94, all of which were in good sanitary condition These vessels were classed as follows Steamships, 57, schooners, 19, barks, 15, brigantine, 1, ships, 2 They were laden as follows Single cargo vessels, 49, general cargo vessels, 25, water ballast, 17, solid ballast, 3 Of the foregoing vessels 18 carried passengers, with a total of 1771

Measles and Diphtheria in Sioux City—The city is threatened with an epidemic of measles At least that is the opinion expressed by Health Officer Dr J M Henry The Doctor when the first case was reported a few days ago looked it up thoroughly as it is something unusual to have measles at this time of the year and it is regarded as a serious matter With the cold weather coming on he says the disease, however slight, may develop into catarrh, bronchitis and lung trouble The Doctor found that the child had been attending the Jennings street school until the day it became so sick that a physician had to be called Several other cases were immediately reported after the first one, and the Doctor attributes them to the exposure to the first case, as the children all attended the same school He says that parents should exercise more precaution and not send their children to school when they know them to be sick or threatened with some disease Some people are of the opinion that the quarantine is not so important in a case of measles but the Doctor says it is just as rigid as in a case of smallpox and if the parents do not pay attention to this fact they will be dealt with according to law Aside from the measles several cases of diphtheria have been reported to the health officer from different parts of the city A diphtheric child rode in the conveyance provided by the school board for carrying children from the outlying districts northwest of town to the West side and an epidemic is feared At the suggestion of Superintendent Kratz the conveyance will not be run for several days until there are some new developments and the children will thereby be given a holiday —*Sioux City* (Iowa) *Tribune*, Oct 3

An Epidemic of Fevers—Diphtheria was reported to the Iowa State Board of Health yesterday at Dubuque, Conway and Blockton, Taylor county, Downs, Wright county, Fertile, Worth county, Clear Lake township, Hamilton county, Early, Sac county, and scarlet fever at Woodbine, Harrison county, and at Dubuque Speaking of the epidemic at Dubuque, the *Globe Journal*, of that city says "Scarlet fever and diphtheria are spreading to an alarming extent in Dubuque Four cases were reported this morning by Sanitary Officer Starr to the city health physician and cards tacked upon the infected houses These diseases are confined to children between the ages of 5 and 16 years and are becoming so prevalent that the question of dismissing the schools is being seriously considered There is a great deal of complaint about people who remove cards from their houses before the time provided by the ordinance The latter provides that a card placed on an infected house shall not be removed for thirty days A case was reported to the sanitary officer a day or two since where a lady tore a card down from her house that ought not to have been removed until the 18th of this month and another case was reported where a policeman without any authority whatever removed a card Under the ordinance these persons are liable to arrest and prosecution and they have no more right to remove a card and go unpunished than have the most humble individual in the city The board of health should order that the cards be replaced When a card is removed people suppose that there is no further liability to catching the disease placarded, and it can therefore be readily seen what danger children are exposed to who happen to visit such houses or play with the children who have had the disease It is said that in some cases physicians attending children afflicted with diphtheria and scarlet fever told their parents that it was not necessary to keep the cards out after the children were up again This is a matter that the public is deeply interested in and the health officer and the board of health will be held reponsible for the strict enforcement of the ordinance The parties who have removed the cards should be compelled to put them up again and comply with the law If this is not done, others may contract the disease There are now about seventy cases of the two diseases in this city"

Health Report of New York State for August, 1896—The *Bulletin* of the State Board of Health of New York, publishes the following summary of the deaths, and rates of deaths by principal causes, for August During August was exprienced the disastrous hot wave beginning on the 6th of the month and continuing ten days, and causing an almost unprecedented mortality among adult males, the aged and the infirm The actual and proportional mortality among children under five years were decidedly lower than in July

The marked deviation from the ordinary mortality of the month, during which there have been reported 12,475 deaths, which is 1,600 more than in the corresponding month of last year, is attributable mainly to deaths from the direct effects of heat (sun stroke), occurring mostly during the early part of the month, 1,125 deaths from this cause having been reported, 1,040 were reported from New York city and Brooklyn, the recorded deaths occurring mostly in the maritime and Hudson valley districts These are reported under deaths from accident and violence There is also, compared with August, 1895, an increase in the reported mortality from diseases of the urinary, nervous and circulatory systems, and also in deaths from old age and from unclassified causes There was no material variation in the mortality from zymotic diseases and consumption, the number of deaths from diarrheal diseases being about the same as last year The death rate was 23 25 against 20 40 in August, 1895 Compared with the preceding month there was a daily average mortality of 402 against 408 in July, the zymotic mortality was less by 750 deaths, the decrease being in the deaths from diarrheal diseases from which there were 2,326 deaths, or nearly 19 per cent of the total, a large number are reported from dysentery, affecting adults There was also a decrease in the mortality from diphtheria, from which there were 257 deaths, a smaller number than in any month for the past ten years, August being generally the month of its smallest prevalence Scarlet fever has almost disappeared from the reported causes of death, but 15 deaths being reported from the maritime district and 4 from the rest of the State Whooping cough increased to 119 death[illegible] uniformly more deaths occur from this cause in August th[illegible] in any other month, the average for the past ten years b[illegible] 125 against an average of 90 for the other months of the [illegible] There is the customary increase in deaths from typhoid [illegible] which caused 171 deaths, the average for the mo[illegible] deaths from local diseases, the only material vari[illegible] those of the digestive system, from which there we[illegible] than in July From the cause stated the reported [illegible] from accidents and violence is largely increased [illegible] mean temperature of the month was 1 degree ab[illegible] mal, but during the first half there was a [illegible] longed period of excessive heat, the mean hi[illegible] was 92 degrees, while the mean lowest [illegible] there was a mean relative humidity of 72 [illegible] eastern part of the State of 78 per cent There was an unusual number of cloudless days, the mean barometer was 30 02, and the rain fall generally deficient

New French Sanitarium for Tuberculous Children at Saint Trojan —The President of the Republic recently inaugurated this new institution on the southwest seacoast (Ile d'Oleron), erected at an expense of about $120,000 to the state, under the superintendence of Dr Bergeron, perpetual secretary of the Académie de Médecine Its official purpose is to hospitalize scrofulous children for tuberculosis The drinking water is sterilized by the new Desmaroux system, at an expense of five centimes the cubic meter, and according to experts in bacteriology, "realizes the last word" in sterilization —*Prog Méd* , September 28

An Island Sanitarium —According to the '*Tiser*, one of the islands in Boston Bay is to be made a summer sanitarium for sick children, and steps are to be taken immediately to carry out the plan Dr W G Macdonald, the city physician, is credited with the origin of the plan, and it is said that the City Board of Health and the mayor actively favor it It is proposed to take the small island, just beyond the iron pier at Marine Park, South Boston It is 160 feet in diameter and unused at the present time, although it is under the jurisdiction of the park commissioners It is contemplated to erect tents and place a milk plant in operation The doctors and nurses will probably be furnished from the City Hospital The location selected is a most desirable one for many reasons The island can be reached from any section of the city by electric cars to City Point during the day or evening There will be an out door and in door patients' department, and the chances of saving a baby's life will be much better on the island than at the home About a week ago Dr Macdonald called upon Mayor Quincy and unfolded the scheme, which was favorably received by his honor, after learning the facts and figures The large number of deaths during the two months was astonishing to him Dr Macdonald wrote to Conrad Reuter, Secretary of the Boston City Hospital trustees, in relation to the matter, and they will consider the scheme at their next meeting The letter follows

"For some time past I have been considering the question of infant mortality in Boston during the summer months, and I have been more and more impressed with the idea that our present means of care and treatment of the little ones are inadequate During July and August of the current year, there were reported to the Boston Board of Health 2,438 deaths from all causes, and including all ages Of these 919 were infants less than 1 year old Four hundred and ninety two were classed under the head of 'cholera infantum ' If we add to this 492, those which were classified as 'enteritis,' 'gastro enteritis,' 'diarrhea,' etc , we will have a total of nearly six hundred and fifty deaths directly attributable to the weather conditions of these months Thus we see that during the heated term more than a third of the total deaths occurred in infants under 1 year, and more than a fourth were due to preventable causes These figures have a pathetic eloquence of their own We have at the present time two noble charities engaged particularly in the care of the suffering babies I mean the floating hospital and the Hospital at Rainsford's Island Both were inaugurated as private charities although one has become a public charge since No improvements could be made on the methods of treatment now in vogue in these two institutions, since one is under most careful and intelligent management and the other is under the directorship of Dr T M Rotch, a gentleman who has no superior in the treatment of infantile ailments Both, however, have the same disadvantage in caring for acute cases, in that boat service is an integral part of both systems Boat service means a fixed time for reception, and if that time be exceeded there is a delay of twenty four to forty eight hours Every physician knows that a delay of even minutes may mean the life of the infant Therefore, it seemed to me that if we could procure a site for an infant's summer hospital, which would combine the benefits of the salt water breezes with accessibility at all times, we would be able to reach a large number of cases which are not now treated We would then not supersede but powerfully assist the work now going on, in the directions which I have specified

"Such a site does exist in the artificial island at the end of the iron pier at the Marine Park, City Point We have there a pier extending into the bay for a distance of 2,640 feet, and leading out from a park which is itself almost surrounded by salt water Beyond the end of the pier an artificial island has been built, which is yet unused, and which will be unused for some time This island is about 160 feet in diameter, a space ample for our purpose Having consulted with the secretary of the park commission on the matter I am satisfied that there would be no trouble in securing this place It is ideally situated, and remains cool during the hottest days in summer In using this island for hospital purposes, we encroach on no one's rights, since it has been hitherto unused As it is intended for use only during the summer months, a tent hospital would be all sufficient and Mr Matthew Sullivan, chief of the architect division of the city of Boston, assures me that a few marquees at this place would not detract from the architectural beauties of the park, but would really add to the general effect by giving the whole place a holiday aspect Such a hospital would be extremely inexpensive Its first cost would include simply a few tents and some carpentering No solid buildings and no costly furnishings would be needed Then would come the question of supplies, and the assistants, who perhaps could be transferred from the central hospital As to the management of such an institution I see no way in which it could be done so thoroughly, so scientifically and so economically as through your boards Your physicians, nurses and attendants have had experience in tent work, and you have already a completeness of organization which could only be effected by any other body at the expense of much time and labor Besides, the poorer people are acquainted with your work and have confidence in it Mothers would thus be willing to intrust their babies to your care Physicians, too, understand the routine by which a patient may be admitted to the Boston City Hospital, and I am satisfied that they would be extremely pleased to have a station to which they might send their infant charges with as little trouble as is now necessary to secure hospital treatment for adults This communication is sent to you at the suggestion of his honor, Mayor Quincy, with whom I have conferred on the matter "

The trustees will hold a meeting in a short time, and it is expected that they will do all in their power to make the scheme a success

BOOK NOTICES

A Text book for Training Schools for Nurses, including physiology and hygiene and the principles and practice of nursing By P M Wise, M D With an introduction by Dr Edward Cowles In two volumes Vol I New York and London G P Putnam's Sons, 1896

The purpose of the book as stated by the author is "to provide a text-book that will suffice for all the recitations in a two years' course in training schools for nurses " 'The course adopted" in these volumes, says the author, "is based upon the hypothesis that a nurse must understand the fundamental principles of physiology and hygiene before a rational understanding of the principles of nursing is possible " The first volume is therefore preparatory, being intended for the first course, and the second volume for the principles and practice of nursing The book is dedicated to that veteran hygienist and superintendent, Dr Edward Cowles

A System of Surgery, by various authors Edited by Frederick Treves, F R C S Vol II, with two colored plates and 487 illustrations 8vo, cl , pp 1120 Philadelphia Lea Brothers & Co , 1896

This volume concludes the work, and will add very considerably to the surgical literature of the period It includes "Injuries and Diseases of Muscles and Tendons," by W Arbuthnot Lane , "Surgery of Deformities," by H H Clutton , "Injuries and Diseases of the Head," by H P Dean , "Injuries and Diseases of the Spine," by W H Bennett , "Concussion of the Spine," by H W Page , "Diseases and Injuries of the Ear," "Diseases of the Nose," by A Marmaduke Sheild , "Injuries and Diseases of the Neck," by Bernard Pitts , "Surgery of the Chest," by Pearce Gould , "Affections of the Mouth, Palate, Tongue, Tonsil and Pharynx," by H F Waterhouse , "Affections of the Esophagus," by W Bruce

Clarke, "Injuries and Diseases of the Abdomen," and "Hernia," by F Treves, "Diseases of the Rectum," by Charles B Ball, "Diseases of the Breast," by W Watson Cheyne, "Injuries and Diseases of the Urinary Organs," "Injuries and Diseases of Testes, Scrotum and Penis," by Henry Morris, and "Injuries and Diseases of the Female Genital Organs," by J Bland Sutton The illustrations are copious but not very well worked out owing to the thin paper Many of them are original This system is an excellent exponent of *fin de siecle* British surgery

Medical and Dental Colleges of the West HISTORIC AND BIOGRAPHIC, Illustrated in photogravure and steel Edited by H G CUTLER Full gilt, quarto, pp 639 Chicago Oxford Publishing Company, 1896

This is the Chicago volume and only one published of a series in which the other western cities are to take their turn So far as we can judge the work has been committed to trustworthy hands The history of Rush Medical College was written by Prof Norman Bridge and Dr John Edwin Rhodes, the Northwestern Medical College by Prof S J Jones, the Woman's Medical School by Prof Marie J Mergler, the College of Physicians and Surgeons by Profs D A K Steele and William E Quine, the Chicago College of Dental Surgery by Prof Truman W Brophy, the Northwestern University Dental School by Prof Edgar D Swain, the Chicago Policlinic by Prof Truman W Miller, the Post Graduate Medical School by Prof W Franklin Coleman, Harvey Medical College by Prof Frances Dickinson, and other schools sectarian in character by those of their own sect In addition to the school histories, biographies of those connected with the several schools are given and in many instances of prominent alumni The work is handsomely printed on fine paper and bound in morocco As an authoritative work on the subject it is not likely to be superseded for many years to come

Anatomy, Descriptive and Surgical By HENRY GRAY, F R S A new edition, thoroughly revised by American authorities, from the thirteenth English edition Edited by T PICKERING PICK, F R C S, with 772 illustrations, many of which are new Pp 1250 Philadelphia and New York, Lea Brothers & Co 1896

When a book reaches its thirteenth edition and has become a standard authority in two hemispheres, there is little to say by way of review

We can only congratulate the editor on the new edition, the publisher for the munificent way in which he has supplied the fine paper, the beautiful illustrations and the superb binding

The new American edition, however, is something more Certain sections have been rewritten, viz, those on the brain, the teeth and the abdominal viscera Dr B B Gallaudet, Dr Fred J Brockaway and Prof J Playfair McMurrich have had charge of the American revision

The Medical and Surgical Uses of Electricity By A D ROCKWELL A M, M D Illustrated with two hundred engravings New edition New York William Wood & Co

No praise could be too high to give this standard book, which is essentially the ninth edition of the well known "Beard and Rockwell" The work has been brought down to date, as one may easily satisfy himself by examining the chapter on electro surgery, which has included the Roentgen ray and the directions for its use "Rockwell" will be turned to as a book which has not disappointed its possessor

A Manual of Pharmacology and Therapeutics By WILLIAM MURRELL, M D, F R C P, Physician to and Lecturer on Pharmacology at the Westminster Hospital, late Examiner in Materia Medica in the University of Edinburgh, and Examiner in Materia Medica and Pharmacy to the Conjoint Board of the Royal College of Surgeons of England, and the Royal College of Physicians of London New York William Wood & Co 516 pages

The friends of Dr Murrell in this country, and they are many, will be extremely glad to welcome this book, which, although not exhaustive, is yet eminently scientific and practical The American edition has been revised by Dr Frederick Caswell of New York The book includes a very entertaining introduction, in which the general principles are given Pharmacology of Organic Substances, Pharmacology of Synthetic Compounds, Pharmacology of Drugs of Vegetable Origin, Pharmacology of Drugs of Animal Origin

Annual Report of the Board of Health and the City and Port of Philadelphia for the year 1895

The volume is included in a city document containing the first annual message of Mayor Warwick, and the Director of the Department of Public Safety The Board reports that the death rate, while slightly in excess of 1894, was rather better than the average for the last ten years, being but 20 44 per 1,000 In regard to antitoxin in diphtheria the Board says "Antitoxin as an immunizing agent has been used so very sparingly that its influence in restricting the disease has not been appreciable Its use as a curative means has been considerable but far from universal, and while its efficacy may *have been demonstrated in many cases, its use has been* too limited as yet to exercise a marked limiting effect upon the disease" A laboratory of bacteriology was established at a cost of $15,000 The report shows a vast amount of excellent sanitary work during the period covered by the report

The Juggernaut of the Moderns, A novel By ROSA HUDSPETH The Arena Publishing Company, Boston, Mass 1896 Price 50 cents

This book is one that has no place in the modern household, nor should it be placed in the hands of the miscellaneous reader Those interested in sociology will find the book entertaining The story is of the ruin of a young woman who goes to a Western town as a typewriter She is is pictured by the authoress as of surpassing beauty, of course, but owing to the fact that she must wear a corset, and displace the abdominal organs, is subject to attacks of hysteria Such a condition naturally makes the subject a fit victim for the wiles of the hypnotist, and her struggles against the dominant influence, and final overthrow, form the materials for the book *Cui bono?*

Kemp & Co's Prescribers' Pharmacopeia A synopsis of the more recent remedies, official and unofficial, with a therapeutic index Third edition Bombay Kemp & Co, Ld 1896

We have tested this book for its account of several of the newer remedies and find it quite accurate, so far as our test goes There is no doubt but it will be found useful in many countries beside India, for which it was originally prepared The additions to the last revisions of the British and U S Pharmacopeias are included in this work It appears there has been no revision of the Indian Pharmacopeia since the edition of 1868

The compilation has been well done the arrangement is systematic and convenient.

Transactions of the Forty sixth Annual Meeting of the Illinois State Medical Society, held in Ottawa, Ill, May 19, 20 and 21 Chicago, 1896

This volume is characterized by its directness throughout The transactions are singularly free from superfluous verbiage, and the authors, as a rule, plunge *in medias res* without any circumlocution The tendency of the time is shown by the appearance of a Committee on Society History, which, a foot note informs us, is composed of those members who have held continuous membership for forty years Although several of the papers have been printed in this JOURNAL many of them have not been elsewhere printed The Society will next year meet at East St Louis and the Missouri State Medical Society will meet at St Louis at the same time We notice that a joint committee has been appointed to act [illegible] mittee from the Missouri State Society [illegible] for one day's joint meeting

An American Text book of Applied Therapeutics for the Use of Practitioners and Students Edited by J C Wilson, M D, Philadelphia, assisted by Augustus A Eshner, M D, Philadelphia The authors are I E Atkinson, Baltimore, Sanger Brown, Chicago, John B Chapin, Philadelphia, Wm C Dabney, Charlottesville, Va (deceased), John C Da Costa, Philadelphia, I N Danforth, Chicago, John L Dawson, Charleston, S C, F X Dercum, Philadelphia, George Dock, Ann Arbor, Robert T Edes, Boston, Augustus A Eshner, Philadelphia, J T Eskridge, Denver, F Forchheimer, Cincinnati, Carl Frese, Philadelphia, Edwin E Graham, Philadelphia, John Guitéras, Philadelphia, Frederick P Henry, Philadelphia, Guy Hinsdale, Philadelphia, Orville Horwitz, Philadelphia, W W Johnston, Washington, D C, Ernest Laplace, Philadelphia, A Laveran, Paris, France, James Hendrie Lloyd, Philadelphia, John Noland Mackenzie, Baltimore, A Lawrence Mason, Boston, Charles K Mills, Philadelphia, John K Mitchell, Philadelphia, W P Northrup, New York City, William Osler, Baltimore, Frederick A Packard, Philadelphia, Theophilus Parvin, Philadelphia, Beaven Rake, London, England, E O Shakespeare, Philadelphia, Wharton Sinkler, Philadelphia, Louis Starr, Philadelphia, Henry W Stelwagon, Philadelphia, James Stewart, Montreal, Charles G Stockton, Buffalo, James Tyson, Philadelphia, Victor C Vaughan, Ann Arbor, James T Whittaker, Cincinnati, J C Wilson, Philadelphia Price, cloth, $7, sheep, $8 Philadelphia W B Saunders

This is a book about the same size as the text book on surgery, and the others of the American text book series

We note with pleasure that the metric system of dosage has been applied throughout, in addition to the old apothecary doses for those who do not care to employ the modern form We regret to see that in the article on actinomycosis, the author has failed to notice the work of the Agricultural Department of our Government in this matter, and we believe that the use of potassium iodid was first promulgated by this bureau, and that the foreign authors are not entitled to priority in the matter We trust that Dr Salmon will be a little more liberal in the distribution of the valuable documents of the Department of Agriculture, Bureau of Animal Industry, they may in time reach the book writers

The Tonic Treatment of Syphilis By E L Keyes, A M, M D Revised edition, 8vo, cl, pp 78 New York D Appleton & Co 1896

The author holds in this essay that "mercury in small doses is a tonic, because under it the general vitality is improved and the number of red blood cells increased"

Twenty years have passed since Professor Keyes gave his views on this subject, and we think he has a right to claim that his position has been fully sustained, and to him more than to any other one man has been due the disappearance of professional prejudice against the use of mercury, in many forms of the disease

The Transactions of the State Medical Society of Wisconsin, for the year 1896, with the Constitution and By laws and list of members Cloth, 8vo, pp 593 Madison, Wis Tracy, Gibbs & Co 1896

This meeting of the Society being the semi centennial anniversary of its foundation it was decided to make it of a popular character and of direct benefit to the people All papers therefore were upon hygienic topics The volume thus produced is a very creditable one and shows a high state of learning in the principles of sanitary science by the Wisconsin faculty We doubt if there are many States in our Union where current topics in hygiene would have received as intelligent treatment The volume concludes with the obituaries of deceased members and the statistics of local societies Secretary Sheldon has edited the volume with his usual skill and precision The next annual meeting will be held at Racine on the first Wednesday in May, 1897

Transactions of the Medical Society of the State of Pennsylvania at its forty sixth annual session, held at Harrisburg, 1896 Vol XXVII Published by the Society, Philadelphia, 1896

Beside the usual number of valuable medical and surgical papers in this volume there is a very interesting summary of the proceedings of the Society from its original meeting by Permanent Secretary William B Atkinson The volume is well arranged and has an excellent index Pittsburg was selected as the next place of meeting The minutes are very full and show the active interest taken in various matters other than pure medical science by the Pennsylvania brethren This society sets a good example to sister societies by devoting a page in its Transactions to the American Medical Association, explaining the method of obtaining membership and giving a favorable notice to the Journal

Feeding in Early Infancy By Arthur V Meigs, M D Octavo, flexible cloth, pp 15 Price 25 cents Philadelphia W B Saunders 1896

This essay was one read at the meeting of the Philadelphia County Medical Society, April, 1896 The article discusses the composition of milk, and gives methods of imitating human milk by proper treatment of cow's milk

Practical Points in Nursing for Nurses in Private Practice, with an appendix, etc, by Emily A M Stoney, etc, pp 456 Philadelphia W B Saunders 1896 Price $1 75 net

In this book the author has rather successfully covered the topics of the entire range of private nursing, and how to meet the various emergencies when distant from medical aid, convenient tables, a dose list in old apothecaries' weights, and a glossary conclude this excellent volume

A Manual of Obstetrics By W A Newman Dorland, A M, M D, with 168 illustrations in the text and 6 full page plates Philadelphia W B Saunders 1896 Price $2.50 net

This is a well written text book, containing the essential knowledge of the art The illustrations are numerous and clear, and the work will be found sufficiently comprehensive to meet ordinary wants

Peroxid of Hydrogen (Medicinal) Glycozone, Hydrozone and Eye Balsam By Charles Marchand Treatment of diseases caused by germs, bacteria and microbes Eleventh Edition, pp 216, Paper New York, 1896 Sent free on application

This book contains direction for using the above preparations, and a number of articles by medical writers based upon their experiences with these drugs, which have appeared in the various medical journals

ASSOCIATION NEWS

The Rush Monument—The Rush Monument Committee has sent the following circular to the Regular profession, which we hope will be heeded

My Dear Doctor—The remarkable success of the relatively small body of homeopaths in the United States, in collecting $75,000 for their monument to Hahnemann to be erected in the city of Washington, ought to make every reputable regular physician in the country keenly alive to the necessity for promptly subscribing to the fund for the long delayed monument to Benjamin Rush

The model for the monument to Hahnemann, which has been on exhibition in New York city, has attracted general admiration on account of its great beauty and artistic excellence, which will make it unrivaled as a work of this kind

The regular medical profession, numbering over one hundred thousand more than the entire body of homeopaths, has thus far subscribed less than $4,000 toward the projected monument to Dr Rush, for which the Navy Department has already generously designated a commanding site in the park fronting the U S Naval Museum of Hygiene, where it will be one of the most conspicuous features of the National capital

Are the regular physicians of the United States willing that this illustrious signer of the Declaration of Independence and the distinguished medical hero of the Revolution, shall be commemorated by an insignificant bust or a mediocre statue, in pitiable contrast with the splendid testimonial at their capital city to a foreign theorist by a comparatively small body of his misguided followers? The crowds of visitors to Washington can not fail to attach a disparaging significance to the spectacle of these two monuments, and we appeal to you to aid the Committee in its endeavor to do justice to the memory of this great father of American medicine pure and undefiled, by sending *by return mail* to either of the undersigned as large a contribution as you may be able to make

ALBERT L GIHON, M D ,
Chairman, R M C , 8 W 127th Street, New York City
GEORGE H ROHE, M D , Sec and Treas , R M C , Sykesville, Md
W MURRAY WEIDMAN, M D , Chairman of R M C for Pennsylvania, Reading, Pa
HENRY D HOLTON, M D , Treas Am Public Health Association, Brattleboro, Vermont
CHARLES McINTIRE, M D , Sec and Treas , Am Academy of Medicine, Easton, Pa

PRACTICAL NOTES

Artificial Respiration for Infants —Laborde's method of artificial respiration by rhythmic traction of the tongue is recommended in the *Cbl f Gynek* No 28, as especially adapted for newborn infants There is none of the painful impression produced on the witnesses by balancing the infant, and it can even be treated while in a warm bath In one case traction repeated forty times recalled the babe to life after 600 oscillations had failed to produce any effect The infant died eight hours later, and numerous cutaneous and subcutaneous lesions were found, evidently caused by the balancing The traction had only caused ecchymosis at the tip of the tongue, in the palatine arch, in the cellular tissue back of the esophagus and in its mucosa These lesions should be known as they might have a medico legal bearing in cases of suspected suffocation—*Bulletin Méd* , September 9

Transverse Resection of Tuberculous Kidney —Bardenheuer, some years ago, proved experimentally the possibility of this operation, and Czerny, Kummell, D'Antona also have affirmed that it could be performed on man Bardenheuer has recently applied it to a couple of patients found on investigation to have the lower part of the kidney affected with tuberculosis He made a transverse section and cut off section after section until absolutely healthy tissue was reached The first case was much enfeebled from traumatic suppuration in the region four months previously, with intermittent fever, and the patient succumbed five hours after resection of the kidney, although the operation had been completed in twenty five minutes, and had been attended with scarcely any loss of blood The other case recovered with no complications For a month urine oozed into the dressing, which was changed every day After this period the wound healed and the patient recovered rapidly The indications for resection in such a case are strict limitation of the lesion to a part of one kidney and no traces of infection in the ureters or small pelvis —*Deutsch Zeitschrift f Chir* No 6

The Surgical Treatment of Focal Epilepsy—From a critical analysis of the results in nineteen cases Drs B Sachs and A G Gerster draw the following conclusions

1 Surgical interference is advisable in those cases of partial epilepsy in which not more than one, or at the utmost two years, have elapsed since the traumatic injury or the beginning of the disease which has given rise to the convulsive seizures

2 In cases of depression or other injury of the skull surgical interference is warranted even though a number of years have elapsed, but the prospect of recovery is brighter the shorter the period of time since the injury

3 Simple trephining may prove sufficient in a number of cases, and particularly in those in which there is an injury to the skull, or in which a cystic condition is the main cause of the epilepsy

4 Excision of cortical tissue is advisable if the epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease

5 Since such cortical lesions are often of a microscopic character, excision should be practiced even if the tissue appears to be perfectly normal at the time of operation but the greatest caution should be exercised in order to make sure that the proper area is removed

6 Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted particularly if too long an interval has not elapsed since the beginning of the palsy

7 In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the association fibers, every surgical procedure is useless —*Am Jour Med Sciences*, October

Albuminuria in Pregnancy and Parturition and Its Relations to Eclampsia —The *British Medical Journal* quotes Saft, in the *Archiv für Gynäcologie*, as saying that albuminuria occurs during the latter half of gestation in 5 41 per cent of all cases, more frequently toward the end of pregnancy and oftener in primiparæ (5 9 per cent) than in multiparæ (4 1 per cent) it is more common also in the former (32 08 per cent) than in the latter (22 6 per cent) during labor As a rule it disappears within a few days after delivery, but is more likely to persist in primiparæ, in whom the effects of gestation upon the kidneys are altogether much more serious than in multiparæ White and red corpuscles in non albuminous urine of pregnant women come from the bladder, but neither during pregnancy nor labor are cylinders found without albumin, though their presence does not seem to depend on the degree of albuminuria, nor to influence its duration Twins and hydramnion are predisposing factors, contraction of the pelvis also, but in multiparæ only during labor Premature labor is a frequent result There is an affection of the kidney due solely to the condition of pregnancy, the pathologic changes in which are merely degenerative, this affection is quite different from nephritis when not complicated it is of favorable prognosis and not likely to terminate in chronic inflammation, but when accompanied by actual nephritis, or disease of the heart, is of very doubtful issue The cause of this affection is probably the auto intoxication of the system by some product of tissue change, such as is the origin of the molimina graviditatis and of the nervous disturbances of the pregnant state The muscular exertion during labor throws extra work on the kidneys, and it is the overloading of the system by this poisonous product that causes eclampsia and the secondary changes in the kidneys, liver and other organs There is thus an intimate, if not a causal connection between albuminuria and eclampsia, and the only proper way to solve the mystery surrounding the latter is to try to determine the nature of the active poison by observations made during gestation In the same journal Schreiber analyzes a large number of cases that have come under treatment since Schauta s report, June, 1880 Of 42 607 confinement cases 137, equal 0 321 per cent., suffered from eclampsia, 19 being already unconscious and many others having had many fits before being admitted to the clinic Of the mothers 109, 79 5 per cent , were primiparæ 113 (97 1 per c) were not more than 30 years old One only had had eclampsia in a previous (first) confinement (4 para sect Cæs) Twins are noted 12 times, hydrocephalus, hydramnion and low lateral placenta one each abnormal rotation twice abnormal pelvis 9 times, 3 breech cases The attacks commenced before labor in 16 78 per cent , during it in 62 04 per cent , and after delivery in 21 16 per cent of the cases, and while 53 17 per cent had less than 5 fits, the average number of fits in 126 was 8 Omitting the 34 children of 29 postpartum cases, of the remaining 115, 37, equal 32 1 per cent , were stillborn, and 56, equal 48 6 per cent , were premature The fetus in 4 antepartum cases was macerated, but the mothers recovered , nor did prolonged duration of the eclamptic state imply a fatal termination The central nervous system was affected in 7 women, 6 had puerperal mania After delivery 62 had no more fits, 5 had only 1, 37 had more than 1, 3 died from Cæsarean section, 29 were puerperal cases In 50 7 per cent of the whole, or 64 7 per cent of the cases before delivery, emptying the uterus had a good effect In 78 cases operated on (5 induction only) the proportion was 62 7 per cent , in 27 delivered spontaneously 70 3 per cent Of 27 deaths (19 7 per cent) 17 only were due to eclampsia alone (12 4 per cent) Four fatal cases only were more than 30 years old, but the mortality of multiparæ (6, equal 21 4 per cent) was greater than that of primiparæ (21, equal 19 2 per cent) The relative mortality of cases commencing before, during, or after childbirth was 30 43 per cent , 18 82 per cent and 13 79 per cent The proportion of deaths is comparatively low, and with the fact shown that delivery without too active interference tends to stop the fits is sufficient to warrant the adoption of conservative treatment for eclampsia, the rather as the woman is spared the dangers inseparable from forced labor The practice of the Vienna clinic for many years has been a prophylactic milk diet for all albuminuric pregnant women if this fail, the induction of labor by bougie or colpeurynter On the outbreak of eclampsia, hot baths, linden tea, wet packing, chloroform and delivery as soon as may be without incisions

NECROLOGY

Elisha Griswold, M D (Jefferson Medical College) at Pittsburgh, October 7 aged 68 He was born in Chester, Pa , March 14, 1828 He was appointed in 1861 by Governor Curtin surgeon of the One Hundred and Twelfth Pennsylvania Volunteers, but afterward became acting division surgeon July 30, 1864, he resigned to accept an appointment by President Lincoln in the corps of United States surgeons Dec 14, 1864, he was transferred to the charge of Judiciary Square Hospital, afterward being sent to New Orleans as chief medical examiner of the Freedmen's bureau for the State of Louisiana In 1867 he was commissioned as lieutenant colonel He was a member of the Mercer County Medical Society, the Trumbull Medical Society of Ohio, and other societies He leaves a wife and two sons

J v Kerchensteiner, M D , Bavaria, aged 65 years The distinguished hygienist and promoter of medical, pharmaceutic and sanitary progress His death is a great loss to his country

John Seibert, M D (University of Pennsylvania, 1857) Chicago, October 9, aged 78 ——George Bonbright Anderson, M D (Jefferson Medical College, Philadelphia, 1877) at Latrobe, Pa , October 5 ——William Eaton, M D , Lloydsville, Ohio, October 6

MISCELLANY

Foundation of Medico surgical Urological Society —This new association recently formed in France, welcomes foreign correspondents, who are requested to apply to Dr Desnos, 31 Rue de Rome, Paris

Inefficient Telephone Service in Columbus —At a recent meeting of the Academy of Medicine of Columbus, Ohio, resolutions were passed reflecting on the telephone service of that town, and a committee was appointed to take proper action in the matter

Pawtucket (R I) Medical Association —The Pawtucket (R I) Medical Association petitioned the city council for the establishment of a modern board of health, without which that city at present languishes

Dr B Mead Bolton, bacteriologist of the Board of Health at Baltimore, Md , has been appointed professor in bacteriology and pathology by the board of curators of the Missouri State University

Chicago Day was observed thoughout the city October 9 The vast processions required medical attention and the Health Department established stations and furnished ambulance service It is under existing ordinances clearly the duty of the city physician to attend to the service of this character, but no appropritions have been given the city physician for these purposes

Dean of the Profession —Since the death of Dr Salomon of England, at the age of 106, Dr Bossy of Havre, France, is now, we believe, the dean of the profession Dr Salomon retired at an early age after his marriage to an heiress, but Dr Bossy has practiced all his life

Robbed Doctors' Houses —Two female sneak thieves were arrested in Chicago, October 5, charged with stealing articles from doctors' offices which they had visited under various pretences About fourteen physicians have sustained losses at the hands of this precious pair Umbrellas, vases, clocks and the like were classes of articles taken

American Methods of Treating Pelvic Suppurations —As a supplement to the discussion of this subject at the International Gynecological Congress, the *Bulletin Médical* summarizes the views of several of our American surgeons Noble, Kelly, McMurtry, Sutton, Stone, Cordier, Marcy, F H Martin, Treves, Wiggin, Kelsey and Carpenter, Ashby and Penrose, quoting extensively from the addresses and discussions at the Atlanta Meeting, published in The Journal, Nos 4 to 6 As has been seen in the report, Byford, Henrotin, Edebohls, Polk and Kelly took an active and important part in the proceedings

Form of "Charcot's Crystals "—New light has been thrown on this subject by Cohn's recent investigations He has found that they are not quadratic octahedrons as supposed, but hexagonal double pyramids The cleavage of the figures found in dried asthma sputum distinctly revealed that they belonged to the hexagonal system Crystallographic tests also proved essential differences between these crystals and Bottcher's, whose plane of polarization is not parallel to the long axis of the crystal —*Deutsch Med Woch* 19, from *Deutsch Archiv f k Medicin*, 4 and 5

Can Not Interfere with Proceedings in Higher Tribunals —The supreme court of Georgia holds, in the case of Baughn v Wiley, decided April 27, 1896, that proceedings to obtain a commission de lunatico inquirendo, under Section 1,855 of the Code of that State, for the purpose of having a person imprisoned in the jail of a given county sent to the asylum as a lunatic, can not be maintained when it appears that such person has been convicted of murder in another county, is subject to the sentence of death, and was confined in the jail in question under an order of the superior court in which the conviction was had and that in such case the writ of mandamus will not lie to compel the ordinary of the county in the jail of which the alleged lunatic is confined to entertain jurisdiction of such proceedings

Methylene Green for Staining Nerve Terminals in the Muscles —Corominos in the *Revista de Ciencias Medicas de Barcelona*, 3, states that this substance stains the terminal ramifications of the axis cylinders much better than the blue or chlorid of gold He uses it in a solution of 100 parts of concentrated aqueous solution of methylene green in 50 parts of absolute alcohol and 1 part acetic acid He leaves the sections twenty-four hours in this solution, and then makes his preparation with glycerin and salt solution The nerve fibers take a fine green while the muscle fibers remain a very light color If left too long the preparation can be decolorized by soaking a while in salt free glycerin

Philadelphia Municipal Home for Consumptives Proposed —Dr Lawrence F Flick, President of the Society for the Prevention of Tuberculosis of Philadelphia, has proposed to the city that some suitable spot for a consumptives' home be selected, whereby those cases to be cared for by themselves in a sanitary way and those already cared for by the municipality, shall be gathered in one institution to be managed under municipal regulation The plan is said to meet with favor by the municipal authorities It is evident that additional means must be taken to prevent the spread of the disease This seems practical and, managed under proper conditions, would be an enormous factor in suppressing the disease in a large city

Essential of Indictment for Attempting to Procure Abortion —A Vermont statute renders all acts done and performed upon a woman pregnant, or supposed to be pregnant, with intent to procure her miscarriage, criminal, unless the same be necessary to preserve her life R L, sec 4247 Construing it, the supreme court of the State holds, in the case of State v Stevenson, decided Aug 21, 1896, that "the same" here refers to the miscarriage, and not to the means to produce a miscarriage, as it can not be said that the thrusting of an instrument into a pregnant woman, who is otherwise in perfect health, is necessary to preserve her life, or that the employment of any of the means commonly used to procure a miscarriage is necessary to preserve her life Under the statute, if a miscarriage is necessary to preserve the life of a pregnant woman, all acts done with the intent to procure it are declared lawful, but, if unnecessary, criminal In order to charge an offense under the statute, it is necessary to negative the exception And the court further holds that an averment that the means employed to procure the miscarriage were not necessary to preserve the life of the woman is not an equivalent to an averment that the miscarriage was not necessary to preserve her life, and that it does not negative the exception

False Testimony and Suggestion —Bérillon found by recent experiments that he was able to secure the testimony in regard to imaginary past occurrences, of over twenty out of every hundred persons tested (all over 15), by verbal suggestion alone, and without any preliminary hypnotic maneuvers The readiness with which he was able to accomplish this was in direct relation to the intelligence of the subject, by no means confined to the lesser developed, but the reverse He also found that a personal interest assisted the realization of the occurrence, for instance, the subject remained indifferent to a suggested criminal occurrence until he was made to believe that the person in question had spoken injuriously of him, when his attention was at once aroused and the whole imaginary occurrence impressed upon his memory as if he had actually witnessed it Bérillon states therefore that large numbers of persons possess such suggestibility in the normal condition that it would be easy by verbal suggestion alone, without any hypnotic maneuvers, to cause them to commit unconscious perjury, and that they should not be considered legally responsible if psychologic examination by a medico legal expert establishes the fact of the suggestion Magistrates are therefore warned against the possibility of suggesting false testimony to impressionable witnesses by the questions asked and methods of procedure, which may produce the same effects by psychic constraint as the torture chambers of old See *Journal de Méd de Paris* for further particulars, September 27

Inebriety, Insanity and Suicide —Inebriety, though long continued and resulting occasionally in temporary insanity, the prerogative court of New Jersey holds, in Koegel v Egner, decided Aug 17, 1896, does not require proof of lucid intervals to give validity to the acts of the drunkard, as is required where general insanity is proved Consequently where habitual intoxication is shown there will be no presumption that incapacitating drunkenness existed, for example, at the time of making a will And if it be conceded that bona fide attempts to commit suicide and accomplishment of suicide, this court further holds it will not follow that such derangement is inconsistent with the ability to make a will It may exist with testamentary capacity The court says that we generally attribute the act of self destruction to a morbid condition of the mind, which may be either fixed insanity or a temporary surrender of reason It is regarded as being in the latter condition where the object of the intended suicide is to secure relief from present pains, either in realization of affliction (mental or physical), disgrace or disaster, or the impelling cause is the apprehension of such evils, for we can not believe that a mind can be in normal health, even though it be cowardly and skeptic as to the future, if it accepts the uncertainty of the state after death as a relief from present mental or physical suffering Proof of mere attempt at suicide and suicide, without more, exhibit at best but a temporary mental affliction, having no reference to antecedent or subsequent periods of time

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The Monument of Paracelsus —In a chapel in Salzburg, Bavaria, stands Paracelsus's monument It is a broken pyramid, and a niche contains his picture with a Latin inscription commemorating his skill as universal It also sets forth that he has cured diseases before considered as past help, and the he had left his property to the poor His coat of arms is engraved on the monument, with the motto *Pax vivis requies æterna sepultis*, peace to the living, the repose of eternity to those who slumber Perhaps one of the most brilliant minds of the later centuries was Philipp Theophrastus von Hohenheim, or, as he afterward named himself, Paracelsus His parents were persons of note, the father was a physician of acknowledged ability and the mother the superintendent of the hospital at the Abbey of Maria Einsiedeln At this place their child was born in 1493 He grew up in the mountain region and his early instruction received diligent attention He learned the medical art from his father, then at 16 he became a student at the university of Basel, but soon left to be a pupil of the distinguished alchemist and philosopher, Trittheim bishop of Wurzbrug He afterward spent a season at the laboratory of Sigismund Fugger, in the Tyrol, then, after the example of the sages of ancient times, he made a tour of the various countries It is affirmed that he went to Tartary, India and Constantinople He was a persistent seeker after knowledge, accepting it with equal readiness from the learned and from persons in the humbler walks of life He held the learning of the universities in low esteem and despised those scholastic discussions which turn more on theories and definitions than on actual knowledge The skill of Paracelsus as a physician was highly esteemed He was for some time a surgeon in the imperial army, and when he had taken up his residence at Basel he was consulted by Erasmus At the recommendation of Œkolampadius, the Protestant reformer he was made city physician and appointed professor of medicine at the university It was no easy task that he set himself, the reformation of the art of healing Luther in Germany, and Zwingli in Switzerland, had no harder task He delivered his lectures in German instead of Latin, and taught new doctrines in medicine and philosophy This created implacable hostility [illegible] his professional rivals, who accused him [illegible] medical degree He would not prescribe drugs sold by the apothecaries and they joined in the attack He was compelled to leave Basel and led a roving life for several years At length Duke Ernst of Bavaria, who was a lover of occult knowledge, gave him a home at Salzburg But the unrelenting hatred of his enemies pursued him to this retreat, and he was treacherously murdered in September, 1541 —Dr Alexander Wilder, in *Metaphysical Magazine*, September

Equity Will Protect Incapacitated Persons —It seems to be the general consensus of judicial opinion, says the court of civil appeals of Texas, in the case of Edwards v Edwards, where a rehearing was denied September 18, 1896, that equity jurisdiction is maintainable on the petition of a "next friend," in cases where a person of weak mind has not been, or can not be, adjudged a lunatic by the special tribunal provided by law for that purpose, and yet is so far incapacitated by disease, decrepitude, or other infirmity, as to require the protection of a court of equity against the undue influence and fraud of others

Medical Department Syracuse University —The formal opening of the new medical college building took place at Syracuse October 5 About four hundred guests were present, and they were received in the lobby on the first floor by Chancellor and Mrs Day Dr and Mrs H D Didama, Dr and Mrs Nathan Jacobson, Dr and Mrs Alfred Mercer, Dr and Mrs John Van Duyn, Dr and Mrs H B Allen, Dr and Mrs A B Miller, and Dr and Mrs H B Elsner In part Chancellor Day said

> I feel that we have great reason for congratulation to night, reason to congratulate the city of Syracuse Some of our citizens may consider us a burden, but were they to understand the merits of the university they would be with us in congratulating Syracuse that she has the university The university is expending $1,000 per day in Syracuse every day in the week and of a year of 400 days Have you any other institution in Syracuse that pays as good a dividend as that? Not even the street railway I measure the influence more that comes from cultured brains The city has been elevated in character by this institution The university is contributing many sciences to the city and outlying country To night we open a new era Now we have the best appointed medical college on this continent We have made it solid and substantial We have combined things which they have in the metropolis and some things which they had not thought of, and now we have a fine college with a peerless faculty The college ranks with the best to be found We are determined to make doctors We want quality and not quantity There are doctors everywhere, but the doctors you and I want are not so much in evidence I ask that the faculty make as good doctors as they are themselves I introduce to you Dean Didama with profound pleasure

Dean Didama came forward amid applause and made a brief response to the Chancellor's remarks In part he said

> Years ago the Geneva College moved to this city and reorganized as the Syracuse Medical College The system at first in vogue sent out scores of doctors who were not capable to practice A new system was soon adopted and this drove away many who desired to get a diploma rather than to deserve one The new plan was a financial failure Success followed later, however, and now we have facilities for doing work in six departments with the best methods and can furnish a four years' course

The Dean gave a brief review of the faculty and spoke of the high standard of instruction which has been attained Dr D M Totman read the following telegram received by Chancellor Day from Andrew V V Raymond, president of Union University "The medical department of Union University sends greeting and congratulation to the College of Medicine of Syracuse on this happy occasion " Another was read by the Doctor from Anson J Upson, chancellor of the University of New York Letters of greeting were sent by a number of prominent New York physicians

Dr Gaylord P Clark of the faculty gave an interesting history of the new building Dr Clark reviewed the building from its start up to the time of completion The structure cost $65,000 and two thirds of that amount has been raised and was acknowledged in Dr Clark's report The building committee was composed of Hendrick Holden, J B Brooks and J B Clark The old building was torn down early in the summer of 1895, and the present structure was started in July and finished about a fortnight ago The building is four stories high and has a floor space of 24,000 square feet It is spacious, well lighted and well equipped It is heated by steam and the "direct-indirect" method is used for the heating and ventilating It is lighted by both gas and electric lights There are several large lecture halls on the first and second floors On the third floor are the departments of physiology and histology, and on the fourth, anatomy and pathology The floors are all of hard wood and the ceilings steel The side walls are of brick and there is little chance for germs to accumulate It is a modern building and was inspected with pleasure by the large number present last evening

The address of the evening was made by Dr Stephen Smith of New York, a former resident of the county Dr Smith was introduced by Dean Didama, and during his address he gave a review of the various systems of treating the sick, and contrasted the methods of years ago with those of the present time "Natural talent is necessary in order to study medicine," said Dr Smith "The growth of medical schools in this country has not been entirely healthy There is now some advance in sciences, and it is gratifying to note this fact This college was the first to adopt a graded course, and now places itself in the front rank of medical colleges The new building is well equipped, and the school enters now upon a new era The school will of course suffer some competition The best equipped physicians I find are educated in the smaller schools and simply complete their studies in a metropolitan institution The college is to be congratulated upon having secured everything necessary to insure its future success This school furnishes pupils ample opportunity to secure a thorough medical education " Dr Smith's remarks were cordially received Dr Smith has enriched the library by the gift of his large private collection

Hospitals

St Luke's Hospital, New York —When the authorities of St Luke's Hospital sold the hospital lands at Fifth Avenue and Fifty fourth Street, they evidently were not aware that their title only conveyed the property for the use and purpose of a hospital and chapel The matter has now come up in the shape of an unpleasant litigation

Baptist Hospital of Chicago —By the will of the late Mrs Maria M Foster the sum of $35,000 is bequeathed to this institution, which we believe has been up to this time, wholly if not exclusively under the management of the medical sect known as "homeopaths "

Change of Address

Bourns, F S , from 65 Capitol Av to 401 Grand Opera House, Atlanta Ga
Carroll C C , from Poughkeepsie to 509 5th Av , New York
Heise, E H from Bay View, Mich to 2315 Washington Av , Chicago
Lundgren C E from Jamestown to 455 Pacific St Brooklyn N Y
Malone L A from 427 Senate Av to 119 N New Jersey St Indianapolis, Ind
Moody H A from Bailey Springs to 311 Congress St , Mobile Ala
Peck George from Cooperstown N Y to 926 N Broad St , Elizabeth N J
Rosser, J C , from Grand Rapids to Rosser Hospital Duluth, Minn
Yeaman, H W , from Philadelphia, Pa , to Pier 14 Red Star Line, New York

LETTERS RECEIVED

Ayres S C Cincinnati Ohio Anderson Willis S , Detroit Mich
Bradner, Henry Benkelman, Neb Berry J T , Brandon Miss
Demaree Owen B Benson, Ky
Castor, H C , Indianapolis Ind, Cullen, C R Gaines Mill, P O , Va
Erwin, C R , Chicago
Gray, Wm B Richmond Va
Haag D E Toledo Ohio Hummel A L Adv Agency, New York
Johnson, H L E Washington D C
Kress & Owen Company New York
Little, C H , Detroit Mich Latta, Samuel W , Philadelphia, Pa
Miles Jacob F , Philadelphia, Pa
Newton R C Montclair N J
Oliver Chas A , Philadelphia, Pa Open Court Publishing Co , Chicago Ill
Parkinson, James H , Sacramento, Cal Payne, Geo F Atlanta, Ga
Parke Davis & Co , Detroit, Mich Pope Mfg Co , Hartford Conn
Riley, W H Boulder Colo Robb Geo H , Sykesville, Md
Staples Franklin Winona Minn
Thayer, Chas P Boston, Mass

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ADDRESS

THE EVOLUTION OF MEDICINE AND NEW METHODS OF MEDICAL TEACHING

An address delivered at the ninth annual opening of the Department of Medicine University of Minnesota

BY R O BEARD, M D
PROFESSOR OF PHYSIOLOGY DEPARTMENT OF MEDICINE UNIVERSITY OF MINNESOTA MINNEAPOLIS

The time was, and but recently, when the history of medicine was regarded as the classic introduction to a text book upon medical practice It was the subject of a regular course of lectures in many institutions of medical learning and, in some, it was even assigned to the guardianship of a distinct chair With the rapid growth of the medical sciences and with the multiplication of essential branches of instruction, it has been crowded out of the curriculum Whether wisely or unwisely, in but a very few schools is its study still maintained

This is a loss certainly, and one to be deplored, if the student of medicine does not acquire that loving reverence for his calling which will lead him to investigate its past, if he has not sufficient taste for the literature of his profession to win him to make its history a voluntary part of his education

For this history of medicine—a curious and entertaining story, centering itself in three great facts of character—the passion for self-knowledge, the imminence of human need dependent upon self-ignorance, and the sentiment of human devotion in the sight of suffering, this history of medicine is as complete and chromographic a picture of the evolution of intellect as the records of the race afford

Deeply into its attractive pages I can not venture this evening, but I commend their study to your leisure hours as a recreation from the more arduous duties of your college course From this history I desire only to draw sufficient evidence of the fact that the medicine of to day is the still evolving product of an evolutional process through which it has passed and still is passing to the position not merely of an art, but of a true science And, as the first item of this evidence, observe that medicine, in its development, has always been most quickly responsive to the favorable environment of physical integrity It has always languished in the atmosphere of physical degradation The worship of the body has been an inspiration to the study of its conditions The stalwart races have been the leaders in medical lore The Arabs, the Greeks, the Moors, the Magyars, the Anglo-Saxons and the Teutons have given the world, at once its best types of physical perfection and its pioneers in the science of medicine

Again, observe that the medicine of each period has been in closest harmony with its intellectual surroundings It has possessed the general qualities of each phase in the evolution of the human mind And itself a creature of human necessity it has in turn created for itself in the public mind an atmosphere luminous in direct proportion to the measure of its own light In an age of barbarism we see medicine as a species of savage sorcery and the popular attitude toward it is one of fear In an age of superstition medicine is the mystery of the alchemist and the popular attitude toward it is that of wonder In an age of ecclesiastic authority medicine becomes oracular and the popular attitude toward it is one of absolute credulty In an age of metaphysics medicine is speculative and the popular attitude toward it is that of dogmatism In an age of experience and superficial observation medicine is empiric and the popular attitude toward it is that which seeks after a sign and demands a specific In an age of science medicine slowly becomes scientific and the popular attitude toward it is that of scepticism of its traditional formulæ and inquiry into the reasons for its faith

Only in the perspective of history can we see these periods outlined sufficiently for the recognition of their essential and separate qualities Since no lines of demarcation lie between them, since insensibly they shade into one another, since the phases of this evolution have not been of coincident development in all communities and through all levels of society, it is not surprising to find the peculiar characteristics of one period invading the next and often exhibiting a remarkable viability It is one of the difficulties with which the philosophy of evolution has to deal, that while the fittest ultimately survives, the unfit makes a desperate struggle for existence Thus we find relics of savagery in the torture of the sick, long outliving the advancement of society into semi-civilization We find the grave cloths of superstition in long-continued use as the swaddling clothes of authoritative medicine We are not so far removed ourselves from the speculative era but that "isms" and "pathies' still persist, and that "systems of human cures or "divine healings still are born and "have their day and cease to be,' proving themselves in their premature decline to be but the "broken lights' of scientific truth We are not yet so far beyond the age of empiricism in medicine, but that we feel the force of the dangerous argument from experience alone and that the multitude of us still prescribe remedies which have a mere reputation of cure which in the vulgar tongue, are good for the ills which ail our patients We are not yet so far advanced into the period of scientific medicine that we trace a cause for every pathologic effect, that we demand to know the physiologic action of every therapeutic agent we employ that we question our daily practice till it gives a satisfactory reason for every custom that we traditionally f[illegible] S[illegible] and so widely distributed has b[illegible] medical profession necessary to meet the growing needs of society that it has sometimes visibly suffered the consequences of its own inertia, rendering it now conservatively slow in response to a moving impulse and again subject to the excesses of its own momental force

Nevertheless, scientific medicine is, I repeat, the still evolving product of an evolutional process which has kept proportional pace with the intellectual development of the race

The evolution of medicine, in common with other subjects of natural development, has not always been a continuous process Occasionally it has suffered a seeming temporary paralysis, and for almost a generation perhaps no important fact of discovery, no new achievement of practice breaks the dead level along which it drags its indifferent way But this apparent arrest of progress proves ultimately to be due merely to some obstacle of error which has barred its upward course, before which it pauses until it gathers sufficient energy to roll the barrier from its path or which now and then, perchance, seems to force it back upon itself and start a retrograde movement which leads about in the end to some broader and better way

And not infrequently does the history of medicine show us that in this, as along other lines of evolutionary force, development has sometimes proceeded by sudden and surprising movements, by the unexpected discovery of some new and widely illuminating truth, by the appearance, as it were, of some massive points of projection in human events or in human life which have given to the few, like Moses, among the mass of men, a glimpse from Pisgah into the land of promise Some of those events and some of those individuals who form these projection-points in the history of the evolution of medicine have only been justly measured or even tardily recognized by the search light of later development Born out of time, they were the abortive products of a false generation in the eyes of their contemporaries, but they were the archetypes of a new era in the judgment of the future Some of them are still unknown, and yet their deeds, which passed unrecognized and are even yet untold, were prophetic of many a modern "new departure" We do not know the names, even, of those obscure professors who conducted a single annual dissection of the human body at Ingolstadt and Heidelberg in the early years of the sixteenth century and who considered it necessary to conduct religious ceremonies after each demonstration before their classes, but it was their spirit which inspired Vesalius, the traveling anatomist of Brussels, and Fallopio of Modena and Eustacchi of Rome whose discoveries have been christened with ' and have immortalized their names

The simple sow-gelder of a German province, who, in 1517, successfully removed the ovaries of his daughter, had little surgical or even veterinary skill to bring to his task, but he deserves recognition, nevertheless, as the nameless author of an operation which has become fashionable, to the weal of many and the woe of some, in these latter days of the nineteenth century

Small honor in his day was accorded to Felix Platter, who, in 1557, insisted upon the psychic treatment instead of the incarceration of the insane, but he it was who led Pinel, in 1801, to remove the fetters from the demented and to teach that mental disease should be looked upon as a brain lesion Prophet he was of a deliverance of the defective classes of society which he anticipated by two centuries and a half of time! Bright projection rising out of the gloom of the professional ignorance of his own times into the clear atmosphere of scientific medicine, his name is deserving of the unconscious worship of the thousands of the hopeless and the helpless who have profited by the evangel he proclaimed!

And among the men whose discoveries have made them famous many there were "of whom the world was not worthy" and who were compelled to wait upon posterity for the recognition they merited As we look back upon their history it seems to us that "there were giants in those days," but they were giants only by comparison with the mass of their fellows among whom they stood They would stand shoulder to shoulder among the scientists of to day They were simply great projection points upon the medical progress of their time, men who laid down the new lines along which progress was made, or from which new departures could come They were not only opportune discoverers, but pioneers, who opened the door to future and sometimes very much postponed research

When Harvey announced the circulation of the blood in 1628, and Malpighi in 1661, discovered the capillary circulation, the facts were viewed as wonder tales by their associates, and not even the discoverers themselves knew what a wonder-world they had opened up to future investigation When Haller, in the eighteenth century, laid down the doctrine of the functional irritability of the nerve-tissues, his colleagues received the new theory with mingled curiosity and suspicion, but they did not know that by virtue of that demonstration, Haller was destined to be called, a century later, 'the Harvey of the nervous mechanism"

When Bichat conducted his brilliant anatomic dissections a hundred years ago, his contemporaries rightly honored him as being the founder of the study of general anatomy, but they did not recognize in him, also, the founder of realism in his profession, they did not see that his scalpel was uncovering facts that were to be used for the overthrow of speculative medicine, they did not read the prophecy of the coming of clinical and laboratory methods in the teaching of the students of to-day in his pregnant words 'Books are merely the memoranda of facts We have living books before us in the living and the dead"

When Jenner discovered the principle of vaccination he was like a miner who has stumbled upon an unexpected gem, whose practical value he puts to a sufficient test, but neither he nor the men who long debated the value of the "find," nor the thousands who have since adopted the practice of vaccination and have minimized the terrors of smallpox thereby, could foresee that his virus might prove, in generations to come, to be the type of many antitoxins, the suggestion of a possibly large field of serotherapy, the forerunner of the gospel of preventive medicine, the faint promise of the proof of the doctrine of immunity from disease

Like all other products of mental evolution medicine has always been responsive to the influence of two forces, the force of attraction from above, incident to the progress of the related sciences, and the force of propulsion from below, incident to the rise of popular intelligence With the beginning of the present century these two forces became active to an extraordinary degree The energy of general scientific development was strongly nascent in the early years of this period It burst finally into a flame which has been burning with increasing and unparalleled brilliancy as the century advanced At the same time were maturing those social and political forces which gave impulse to the magic ideas of Pestalozzi, the father of general education The intelligence which, in earlier ages, had been the heritage of the high-born, began to penetrate downward and leaven the lower strata of society, until it broke forth again, at all levels, in the energy of a popular demand for knowledge The influence of this general rise of intelligence upon the education of the so-called learned professions—learned, hitherto, only by comparision with the masses—who can measure?

These twin forces found the profession of medicine steeped in the atmosphere of speculation and apparently unstirred by the touch of that spirit of practical realism which had its birth in the labors of Bichat But, buried as it was in the schools and systems of speculative thought, it had in it the living germs of scientific development which could not but respond to the quickening influences of the times Not to attempt a general survey of these influences of nineteenth century science, we may just pause to note, by way of illustration, the wide range and varied character of the attractive forces by the aid of which medicine has been lifted to a scientific plane It needs but to mention the labors of Schwann and Lamarck and Schleiden in microscopic botany, of Berthollet and Pasteur in chemistry, of Darwin, Haeckel and Wallace in the philosophy of development, of Faraday, Ohm, Ampère, Seebeck, Edison and Bell in electricity, of Malus in polarization, of Kirchhoff in spectrum analysis, of Fox Talbot and others in photography, of Dutrochet in physiologic chemistry—it needs but to note the names and works of these to see whence sprung the irresistible influences which are helping to make of medicine a science and which have given birth and opportunity to a generation of medical scientists whose names and number and achievements bid fair to rival in brilliancy those of their fathers in general scientific research

With the history of these masters in scientific medicine you will become familiar as you profit by the conquests and discoveries they have made Into this history even of the moderns in medicine it is not a part of my purpose to enter Suffice it that medicine through their labors, is a science It has been difficult for the profession to get away from the speculative tendencies of an earlier day, those hereditary habits still crop out with the persistency of tares among the wheat It has been difficult to outgrow the love for our traditional position of authority in the community, but the day of the oracular in medicine has gone by, the oracle has been found out and it is works, not words, which can win allegiance from the people of to-day It has been difficult to abandon the practice of empiricism, to learn that the argument from experience is a most dangerous one in medicine when all its conclusions rest upon a "variable' quantity in the person of the patient It has been difficult to substitute for these, through the great body of the profession, the exercise of a scientific spirit Even to-day that spirit moves but feebly in the minds of many It has not been easy to learn the unaccustomed lesson of putting "the why" before "the there fore," of distrusting the effect until the cause is clear of doubting "symptoms" and seeking 'signs ' of making conclusion wait upon investigation of applying to the human body the instruments of demonstration, rather than the intuitions of the doctor, of accepting the verdict of the thermometer, the stethoscope, the battery, the microscope, the chemic reagent, the bacteriologic test, aye, even the knife of the autopsy—the testimony in a word, of eye and ear and touch, rather than the feelings of the patient or the supposititious effects of an empiric formula The transition period through which medicine has had to pass has been a slow and tedious phase in its evolution, so large a body, of necessity, moves slowly, but nevertheless it moves No longer the physician is compelled to walk in the half-light of variable experience or in the gloom of metaphysic theories, no longer he treads softly upon the velvet of popular reverence woven out of his fancied possession of occult truths, he stands out in the light of a new day his hypotheses are useful but they must be proven his theories may outrun his practice but they must be supported by facts, he must be able to give to every man the reasons for his faith For the medicine of to day is a science

But, at first, and for a comparatively long period, considering the rapid movement of its later evolution, medicine was, as I have intimated, the science of the masters Indeed, this perhaps is to be accounted for by the very rapidity of its progress Only the master-mind, the mind of exceptional opportunities could keep pace with its league-long steps Slowly the scientific spirit permeated the profession but old and young were compelled, at first, if they received it at all, to receive it at the feet of some medical Gamaliel The masters have slowly multiplied, but, until very recently, facts have been acquired of necessity, at second hand, we have learned the scientific methods of medicine by proxy We of the generation you follow, grew up in a period of pupilage, during which the few were trained in the seats of scientific learning and went out to preach the gospel to the many Students heard with the ear, but did not see with the eye, the structural secrets of the human body if they saw, they did not do the experiments which proved the problems they studied or the operations upon which, in practice, they must soon put untrained hands Their practical work was confined to the use of the scalpel in a single dissection of "an upper' and "a lower," and to the trial of a few chemic reactions in the test-tube for a few short weeks Occasionally they listened to a clinic talk at the bedside of a typical case, or viewed from the distant benches the white aprons of the surgeons and the instruments in the hands of assistants at the operating table or, far less often they gathered, with hungry eyes about the postmortem table in search of a few living facts to be discovered from the dead Some of these imperfect methods, for want of better we still pursue But the age of the masters in medicine, as in other fields is passing by A period of individualism in medicine as in everything else, is upon us There are not fewer intellectual giants than of old, but the medicine of to day demands that all its members shall be of larger mold The many are growing to the stature of the few Science is becoming more available Its instruments are more accessible Its methods are easier of attainment Its results are more easily measured by improved means Its adaptations to daily practice are more numerous and indispensable Personal practical training is more necessary than of old Each must do in the medical science of the future, to a very great degree, what any other has done It is not enough, students in medicine of to-day, that you shall see through others' eyes, you must also see with your own, it is not enough that demonstrations shall be made and tests done for you, you must do them for yourselves, it is not enough that shall know the names of drugs, you must be able to recognize them, you must not only learn their action, but you should *see* it, you must not only be able to tell the constituents of the body fluids and tissues, but you must be able to analyze them, you must not only learn by ear the structural peculiarities of the tissues, you must be able to differentiate lung and liver and nerve tissue, under the microscope, you must not only be able to count a pulse, you must be able to study its qualities, you must not only know the meaning of heart sounds, you must be able to discover them and read them aright, you must not only be able to take temperature, but you must understand its production, its regulation and its means of loss you must not only understand the principles of dietetics and food-preparation, you should be able to put them into personal practice, you must not only learn the principles of obstetrics, but you must practice them individually under the guidance of your teachers you must not only witness operations, you must *do* them on the patient or on the cadaver, you must not not only know the peculiarities of pathologic products, you must be able to make their differential diagnosis under the glass you must not only know the names of disease germs, you must be able to recognize their forms, you must see them not only in the persons of their victims, you must rear them in the culture-tube, you must not only master the details of physical diagnosis, you must be able to apply them to disease at the bedside or in the clinic The opportunity to accomplish these things is enlarging with every passing year It is the heritage which the masters of the past have bequeathed to the students of the present

Ladies and Gentlemen I have heard these things called the adornments of medical teaching A student informed me but a few days ago that her preceptor had advised her that these accessories were "nice but not necessary" They *are* embellishments, it is true, of the medical practice of fifteen or twenty years ago, but they constitute the warp and woof of the scientific medicine of to day For the attainment of this ideal education, it is necessary for the teacher to come as closely as possible into contact with the individual student The didactic instruction of large classes is a means of time saving, but for recitations and reviews, for laboratory exercises, for demonstrations, for purposes of bedside and clinic diagnosis, for obstetric attendance, for the witness or the performance of operations, in short, for all forms of practical work, these classes should be divided into small sections Upon the adoption of such a recitation system and upon the initiation of such section work in several *clinic* branches this college is to be congratulated Its fuller extension to the entire laboratory and clinic system and even to the surgical operating room is to be desired It is possible for a class of ten or fifteen students to witness an operation with profit, but the hours spent by large crowds of students in a surgical amphitheater are largely wasted and could be spent by the majority of students more profitably over a text-book descriptive of the operation they are seeking to witness A multiplication of laboratory assistants and clinic instructors is involved in this plea for a more elaborate system of sectional work, it means a larger equipment and a larger expenditure of material, but its adoption is in the path of progress in our professional schools As a step in the same satisfactory direction we welcome the partial abandonment of the final examination system and the substitution for it of oral recitations throughout the term and at the close of the college year

In a word, medical education is to be conducted, so far as possible, in the individual rather than in the mass It is to be less didactic and more practical It is to be less in the lecture room and more in the laboratory, in the hospital, in the dispensary and in the clinic Leaders in medical science, teachers in medical thought there must always be, but each man and woman who essays to study medicine must be a master of his or her profession A new relationship exists between the leader and his followers, between the teacher and the taught, a relationship of companionship History is repeating itself in a return to the more conversational methods of the Socratic system The spirit of mastery which put into the mouth of the teacher that voice of dogmatic authority which became the old prophets of tradition, "Thus said the Lord," is passing away and in its place we hear the voice of more philosophic, more reasonable invitation "Come now and let us reason together" To such a companionship of science, to such an intimate association of research, to such a leadership upon the part of the teacher and to such a following upon the part of the pupil, to the immediate possession of a place, at the very outset of your college career, in the profession of scientific medicine, on behalf of my colleagues, I welcome you Personally, I do not care to what school of medicine you belong You may attach yourselves to any or to all schools you will be safe, and your future patients will be safe, under any banner, if only you are scientists in medicine If you are not, it matters nothing to what school you claim allegiance, you will be an eventual failure If you have come here prepared to work with us and for us, as well as for yourselves, determined to make yourselves, not merely practitioners of medicine but medical scientists, I extend to you, in the name of this University, the right hand of scientific fellowship If one of you has come here to purchase a diploma and to gain it by the shortest and easiest route to its attainment, I want to bid you, in the name of medical science, to find a less exacting and more lucrative calling or, if you must seek it upon this commercial basis, to go where diplomas are for sale

But, believing as I do, in the sincerity with which you seek admission to this honorable and scientific profession, let me ask you to begin your career with a clear recognition, not only of the demands which it will put upon you at the end of your college course, but also of the demands which it puts upon you, as men and women, as physicians in the making, now If you are to be a medical scientist you must be equipped to become one If you are to be a master among men you must have a due preparation for the mastery of your science A pyramid can not be reared upon the dimensions of its apex A new education in medicine is before you A new standard of requirements measures you If you are to survive in the fierce struggle which awaits the competitors of to-day in this calling of ours, you must be fit to survive. If you are not, that struggle will surely crowd the unfit eventually to the wall. The success of our sowing will depend upon the quality of the soil you offer to the seed. The character of the harvest you yield, will reflect upon the prior preparation of the brain soil you bring to the seeder. You will join with me, I know, in congratulating this college and the university to which it belongs, that it has already planned to safeguard, still further than it now does, these portals to the profession by demanding of its matriculants a higher measure of preliminary culture than they have been required to possess in the past. The higher evolution of the science of medicine must depend upon the quality of the men and women who gather in its institutions of learning and graduate from their halls. The medical science of the future will be the product of the labors of the profession, not merely among its masters, but in its mass.

ORIGINAL ARTICLES

REPORT OF ONE HUNDRED CASES OF EXTRACTION OF HARD CATARACT

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY LYMAN WARE, M.D.

CHICAGO, ILL.

It is not unusual for a surgeon, whether East or West, at home or abroad, to consider his special method of extraction of cataract superior to that of any other. Certainly, when one's cases are somewhat limited, it is infinitely better to become perfectly familiar with a special method and adhere to it as closely as possible, and whenever changes are made in order to accomplish some definite object, they should be gradual. The operation to be chosen should be the simplest and easiest of execution.

The loss of an eye means much to a patient, whether he be rich or poor. Relatively speaking, it is as unfortunate for an oculist to lose an eye as for a surgeon to lose a life. From Daniel's time to the present it has ever been sought to simplify the operation. I may be considered too conservative, but the results I have obtained will, I am sure, compare favorably with those of any other method, and I think that in the future they will be better than in the past for the simple reason that "practice and care make perfect."

When there is no complication, that is, no disease of the eye aside from the cataract, and when the patient is reasonably tractable every operation ought to be a success. A number of years ago I reported (in the *Chicago Medical Ex.*) Von Jager's method of operating, which impressed me most favorably. Many of you can recall the grace and ease with which he operated, seated, after the manner of Daniel, on a stool directly in front of, and somewhat higher than the patient, who faced a large window, he considered it play to remove cataracts. His methods seemed to me ideal. The first twenty-five cases operated upon, I attempted to follow them in most respects. I used his concavo convex knives, and cystitome, but instead of facing, I found it easier to stand behind the patient who either lay upon a table near or sat in a chair facing a window. A single and simple obstacle caused me to substitute Von Graefe's for Von Jager's knives. However simple it may seem, it was almost impossible to get Jager's knives sharpened in this country. After trying a number of instrument makers in Chicago and New York, I finally became discouraged and wholly discontinued their use. No knife, in my experience, makes so clean and even an incision as Von Jager's when in perfect condition, and no wound heals so quickly.

The cases here reported were charity patients. Preliminary iridectomy was done in most of the cases in those where the cataract was fully ripe and the patients came from a distance, the extraction was done within a week or ten days after the preliminary operation. When the cataract was *not* fully ripe, or the patient lived near, a longer interval was allowed between the two operations. Usually only a small portion of the iris was excised, and as it was always under the upper lid, there was no deformity nor was there, after the lapse of a few weeks, any complaint of dazzling or glaring light. The subsequent appearance of the eye was that of a very moderate coloboma. But should some deformity exist, what is that compared to useful vision? Truly, more time is required of both operator and patient, but what is time to the doctor when an eye is at stake, or to the patient who may have groped in darkness for years? Then, too by a preliminary iridectomy at least two important questions may be solved—how the patient, and how the eye is going to behave. One is warranted in stating that the first operation will be the more severe and consequently if the patient is tractable and quiet during the first, there is little doubt that he will be equally so during the second. If there is any predisposition to conjunctivitis or inflammation of any form, the preliminary iridectomy and subsequent treatment will most probably develop it, in which case the extraction would be deferred until the disease was completely cured. Patients were not operated upon until they became somewhat familiar with the surroundings, that is, one or two days after their admission. The preparatory treatment consisted in giving a slight mercurial laxative and bath the day before the operation, and thoroughly washing the head. The immediate treatment consisted in irrigating the cul-de sac with a solution of mercury bichlorid, 1 to 5,000, and then with a saturated solution of boric acid, followed by the instillation of a few drops of a 4 per cent solution of cocain every three or four minutes until the anesthesia of the cornea was complete. As a rule, but three instruments were used—fixation forceps, knife and cystitome. An assistant lightly raised the upper lid while the corneal section was being made which usually included the upper two-fifths, and was made in the cornea at the sclero corneal junction. In cases where the lens was very large and hard the section was made even larger including nearly one-half of the cornea, as was originally advised. I am sure that a small section is a most serious mistake and probably causes more complications and the loss of more eyes than all others combined. The capsule was uniformly opened in the periphery after Knapp's method, except in those cases of hypermature cataract, and where the capsule appeared tough or showed calcareous deposits when the lens was removed with the capsule by means of Föster's capsule forceps. It is to be regretted that it is not always possible to determine in advance when a lens can be removed in its capsule as the result is so much better than when the capsule is incised and

NO	NAME	AGE	CATARACT	CONDITION	OPERATION	VISION	REMARKS
1	Grabb J	58	Senile, bilateral, 20 years	Mature, perception and projection good	Left ext 1 mo after irid	20-70	Iritis followed irid which necessitated postponement of extraction 1 month
2—3	Ferindall, A S	63	Senile, bilateral	Mature, P & P good	Ext 2 weeks after irid	L 20-50, R 20-20	
4—5	Goldburg, N	69	Senile, right eye	Mature, P & P good	Ext 12 days after irid	L 20-50, R 20-80	
6	Brook H	73	Senile	Mature, P & P good	Left ext 10 days after irid	20-20	
7—8	Goodaker, L	60	Senile, 6 years	Mature, P & P good	Right ext 7 weeks after irid, left ext 2 weeks after irid	20-30, 20-40	
9	Keenan, J	53	Senile, double	Right mature, P & P poor	Ext 2 weeks after irid		Floating bodies, vitreous
10—11	Key, S	74	Senile, double, 10 years	P & P good	Left ext 10 days after irid, right ext 1 mo after irid	20-200, 20-100	
12—13	Benson, A	77	Senile, double, 7 years	P & P good	Left ext 11 days after irid, right ext 1 mo after irid	20-40, 20-40	
14—15	Peterson C	65	Senile	Right, calcareous corneal opacities, left mature 3 years, chr conj dacryocystitis left	Right ext 1 week after irid left ext 2 weeks after irid	R no improvement, L 20-200	Six weeks later returned for discission left eye Pan ophthal & phthisis bulbi
16	Bergeron, E	43	Senile double	Mature, P & P poor	Left ext 10 days after irid	Slight improvm't	Chr choroiditis floating bodies in the vitreous
17	Hurley, B	46	Senile, left eye, 2 years	Mature, P & P poor	Ext 10 days after irid	No improvement	Chorioidal disease
18—19	Wymn, M	53	Senile double 7 years	Mature, P & P good	Left ext 9 days after irid, right 1 mo after irid	20-40, 20-60	
20—21	Hanson, C	72	Senile, double 2 years	Mature, P & P good	Left ext 2 weeks after irid, right ext 4 weeks after irid	20-100 20-200	
22	O Malley, K	14	Anterior pyramidal cataract	Right P & P poor	Right ext 2 weeks after irid	No improvement	
23	Shodd C	17	Senile, double 2 years	Mature, P & P good	Left ext 8 weeks after irid Fifth day after extraction patient hit her eye, irido cyclitis followed and eye enucleated		
24	Cameron, E C	12	Senile, left eye, 5 years	Calcar, P & P fair only	Ext 18 days after irid	No record	
25	Welch C	15	Senile, right eye, 3 years	Mature P & P good	Ext 2 weeks after irid	No record	Good recovery
26	Hoevch, F	6[illegible]	Senile, left eye, 1 year	Mature P & P good	Ext 2 weeks after irid	No record	Good recovery
27—28	Walker, M	52	Senile, double 3 years	Mature P & P good	Left ext 2 weeks after irid right ext 3 weeks after irid	20-40, 20-80	
20	Johnson C	58	Senile, double, 3 years	Mature P & P good	Left ext 1 mo after irid Small incision hard unyielding lens which required some force to press out, and some vitreous was lost		Five days after operation was hurt when dressings were being changed Chronic irido cyclitis Eye removed 4 years later
30	Tindall M	62	Senile, right	Mature P & P only fair	Ext 2 weeks after irid Small incision some vitreous lost		Occlusion of pupil
31—32	Johnson H A	63	Senile, double	Mature, P & P good	Left ext 2 weeks after irid, right ext 8 weeks after irid	20-30, 20-40	
33	Price S	67	Senile right, 6 years	Mature, P & P good	Ext 2 weeks after irid	20-100	
34	Modalna J	80	Senile left eye, 10 years	Mature, P & P good	Ext 2 weeks after irid Discission 4 weeks after extraction	20-60	
35—36	Bergen Eliz	65	Senile double	Mature P & P good	Left ext 10 days after irid right ext 3 weeks after irid	L 20-40, R 20-50	
37	McNamara H	59	Senile right eye, 1 year	Mature P & P good	Ext 5 days after irid	No record	Good recovery
38	Brown Eliz	78	Senile double, several years	Mature P & P good	Left ext 9 days after irid	No record	Good recovery
—40	Linkin L	45	Perception cap	Left P & P bad, right P & P fair	Irid both eyes and capsule slightly Scratched with cystitome Left ext 2 wks after irid, right ext 1 mo after irid	Slight improvm't	Retinitis pigmentosa
41—42	Henbrogen, E	65	Senile, double	Hyperm P & P poor	Right ext 2 weeks after irid left extraction attempted 8 weeks after irid on account of liquid vitreous was not successful	No improvement	Chorioidal atrophy
43—44	Jones, S	41	Senile, double	Right mature, P & P good left imm, P & P good	Right ext 14 days after irid, left ext 6 weeks after irid	No record	
45	Carmody M	58	Senile, right eye 1 year	Mature P & P good	Right ext 14 days after irid	20-200	Subsequently needled No record
46	Travis, C G	62	Senile right eye 4 years	P & P good	Ext 21 days after irid	No record	Subsequently needled No record
47	Welch Cath	48	Senile right eye	P & P good	Ext 12 days after irid followed by much pain and ecchymosis, good recovery	20-80	Small incision Wk necessitated pressure to force out lens Some vitreous lost
48	Islander, J	44	Senile, left eye, 3 years	Mature P & P good	Ext 18 days after irid	20-40	
49	Leutfer, A	55	Senile, bilateral	Left mature right imm, P & P good	Ext 21 days after irid Capsule needled 1 mo later	20-30	
50—51	Remney, Eliz	85	Senile bilateral, right 10 years, left 3 years	Mature, P & P good	Left ext 14 days after irid, right ext 18 days after irid	20-80 20-100	
52—53	Herverton, T	19	Cong post polar bilateral	P & P bad	Right ext 10 days after irid, left ext 8 weeks after irid		Slightly improved only
54	Higby, M B	78	Senile, bilateral, 1 year	Mature P & P good	Ext 1 mo after irid	20-80	
55—56	Bell M	72	Senile bilateral, 5 years	Mature P & P good	Left ext 10 days after irid, right ext 8 weeks after irid	20-80, 20-40	
57—58	Malin, A E	41	Senile double 7 years	Left calc, right mature	Right ext 7 days after irid left capsule and adhered to lens Removal with cap forceps	20-40 20-40	
59	Call, M	53	Senile, right eye, left, aphakial	Mature, P & P good	Ext 1 week after irid	20-40	Some reaction Too small incision Good recovery
60	Mederlone, U	58	Senile, double	Right mature, left imm, P & P good	Right ext 2 weeks after irid	20-100	One week after ext patient removed dressing at night reopened wound and caused some prolapse of iris which was excised Good recovery
61	Kemphe, M	52	Senile bilateral, 1 year	Mature P & P good	Pterygium removed from right left ext 2 weeks after irid	20-60	
62	Maxwell, K	48	Senile, right eye	Mature, P & P good	Ext 13 days after irid	20-80	Cap adh removed with lens

NO	NAME	AGE	CATARACT	CONDITION	OPERATION	VISION	REMARKS
63–64	Conty, J	58	Senile, bilateral	Mature, P & P good	Left ext 1 week after irid right ext 2 weeks after irid	20–40 20–40	
65	Karsteen M	68	Senile, bilateral left, 10 years	Left mature, P & P fair only right imm	Left ext 7 weeks after irid	No record	Considerable reaction followed irid Cap adh lens removed with hook some vitreous lost Good recy
66	Sanders E	78	Senile, double	Right mature, left imm	Right ext 3 weeks after irid	20–50	
67	Weinburg, A	50	Senile right eye	Mature, P & P good	Ext 2 mos after irid	20–30	
68	Doolittle B	77	Senile left, right aphakial	Mature, P & P good	Ext 10 days after irid	20–80	
69	Baum, M	62	Senile left eye, 1 year	Mature, P & P good	Ext 14 days after irid	20–30	
70–71	Danforth L	72	Senile, bilateral 5 years	Mature, P & P good	Left ext 1 mo after irid right ext 5 weeks after irid	20–80 20–100	Cap needled 2 mos after ext No record
72	Karstens M	68	Senile, right eye, 6 years	Mature, P & P fair only	Ext 2 weeks after irid		Good recovery
73	Sterling, E	32	Traumatic, 8 years	P & P fair only	Ext 1 week after irid		Good recovery
74	Salem S	84	Senile left eye 15 years	Hypermature, P & P fair only	Ext 11 days after irid		Slow recovery counts fingers 5 feet
75	Amsler, M	47	Senile, bilateral	Right mature P & P good, left incip	Right ext 11 days after irid	20–40	
76	Underwood, M	61	Senile double	Left mature, right incip	Ext 12 days after irid	20–40	
77	Connan, A	65	Senile, left eye 10 years	Mature P & P good	Ext 2 weeks after irid	20–80	
78–79	Jewell, R	73	Senile bilateral	Left mature, P & P Right incip	Left ext 7 days after irid right ext 6 mos after irid	20–40, 20–60	
80–81	Ryerson E	58	Senile bilateral 1 year	Mature P & P good	Left ext 1 week after irid right ext 2 weeks after irid	20–40, 20–60	
82–83	McFarland	50	Senile bilateral	Incip P & P good	Left ext 1 mo after irid, right ext 6 weeks after irid	20–40 20–80	
84	Gralish K	40	Senile left eye	Mature P & P good	Ext 16 days after irid	20–80	
86	Brew, M	51	Senile right eye	Mature P & P good	Ext 10 days after irid Needled 1 mo later	20–40	
87–88	T M A	46	Hard 2 years	P & P fair only	Left ext 1 week after irid, right ext 2 weeks after irid Cap needled 1 mo after extraction	20–80 20–60	
89	Appel L	65	Senile double	Left mature right incip P & P good	Left ext 1 week after irid Cap needled 1 mo after extraction	20–30	
90	Jager J	40	Senile, left eye	Mature P & P good right aphakial 3 yrs	Left ext 1 week after irid	20–40	
91–92	Hans, Jos	80	Senile bilateral	Bilateral mature P & P	Left ext 1 week after irid right ext 3 weeks after irid	20–200, 20–100	
93–94	Karsten C	62	Senile bilateral	Bilateral mature P & P good	Left ext 2 weeks after irid, right ext 4 weeks after irid	20–80 20–80	
95	Conners	66	Senile, right eye	Mature P & P good	Ext 1 week after irid	20–60	
96	Sweany S	64	Senile, bilateral	Mature P & P good	Right ext 1 week after irid	20–40	
97	Melnen B	64	Senile right eye	Mature P & P good	Ext 1 mo after irid	20–80	
98	Steele A	70	Senile right eye	Mature, P & P good	Ext 12 days after irid	20–60	
99	McMaher M	65	Senile, bilateral	Mature, P & P good	Right ext 10 days after irid	20–100	Slight amount vitreous lost Slow recovery
100	Buckley J	65	Senile right eye	Mature, P & P good	Ext 14 days after irid	20–60	

the lens only extracted After the completion of the corneal incision, the fixation forceps are removed and the further aid of an assistant is hardly necessary Slight pressure is made upon the peripheral lips of the wound, then, in many cases, the natural contraction of the lower lid will expel the lens, but should it not, gentle counter-pressure by means of the thumb applied upon the lid will be amply sufficient The eye is then thoroughly washed with a warm saturated solution of boric acid, and should there be any lens matter remaining it is generally coaxed out in the same manner A small pledget of lint or cotton is saturated with the boric solution and laid upon the eye, over which absorbent cotton is placed, just sufficient to keep the lids well closed, and feel comfortable to the patient After the gauze or woolen bandage is applied the patient is allowed to walk to his room, and is put immediately to bed, where under ordinary circumstances he remains for twenty-four, or preferably forty-eight hours The room is not darkened, but bright or glaring light excluded Should the dressing of the eye be uncomfortable, it is changed and applied more lightly Eighteen or twenty hours after the operation the bandage is removed, the dressing carefully inspected, and should there be no unfavorable indications the eye, unopened, is well bathed with the saturated boric or bichlorid solution, and a few drops of a 1 per cent solution of atropia is dropped into the inner canthus of the eye Should there be no complications the eye is similarly dressed every twenty-four hours until the third or fourth day, when the bandage is removed and a single muslin strip tied over the eye for a day or two, when a shade is substituted and worn as long as the light is unpleasant The average length of time in the hospital was one month, which may seem rather long, but as many lived at a distance, it was deemed expedient to keep them as long as possible in order to perform discission should it be necessary, this was done in about 25 per cent of the cases Patients were not confined to bed longer than twenty-four hours if they wished to sit up, nor to their rooms more than three or four days It was, however, generally found that patients recovered more rapidly if kept reasonably quiet the first few days or week Patients living in the city were frequently discharged ten days or two weeks after the operation

Discission, which was usually done with Knapp s needle knife, was performed usually from three to six weeks after the extraction, and uniformly improved vision

I would especially desire to call attention to the unfavorable cases, as the consideration of such is sometimes more profitable than that of the successful ones

Case 15 —Mrs C Peterson, age 65, senile cataract, blind ten years, chronic conjunctivitis of both eyes for several years and dacryocystitis of the left for three or four years general condition feeble She was placed at once upon tonics and a generous diet The conjunctivitis was treated with astringents - mild sulphates and weak solution of nitrate of silver—the dacryocystitis by Bowman s method and injections of solution of bichlorid of mercury, 1 to 4 000 and bougies of iodoform and zinc. After a month of such treatment the general and local conditions fully warranted the cataract operation, which was performed on each eye, one week intervening between the operations She made a good recovery without an untoward symptom—V =20 100 in left, right in which there were corneal opacities and calcareous lens, no improvement Two weeks after the last extraction she was allowed to go to her home, with the understanding that she would return in a month or six weeks On her return there was a slight discharge as a result of the chronic dacryocystitis, but so slight I did not think it possible, after a thorough irrigation of the sac and duct with the bichlorid solution, to cause any trouble, consequently I did the operation of discission on left eye, hoping to improve her vision The operation was performed in the usual manner and gave every promise of success, yet within twenty four hours distinct symptoms of panophthalmitis appeared, and the patient lost her eye and almost her life Subsequently the operator was confronted with a suit for damages Previously I had considered the operation of discission so simple and free from accidents as hardly to give it a thought

Case 29 —Mrs M Johnson, age 64, senile cataract both eyes, left fully, right partially mature After preliminary iridectomy of the left, the lens was easily extracted without any complication, and until the fifth day there was not an unfavorable indication On that day she complained of considerable pain in the eye and temple On examination the eye was found to be much injected, the anterior chamber very shallow and the wound reopened In explanation of the greatly changed condition she stated that the resident physician, in changing the dressing the evening before, had in some manner hit the eye, which had immediately caused excruciating pain Chronic irido cyclitis developed, and as the opposite eye was endangered by sympathetic inflammation, the diseased eye was advised removed

Case 23 —Shodd C , aged 47, extracted left eye three weeks after iridectomy Operation normal except incision somewhat small for the hard, unyielding lens, requiring more than the usual pressure to force it out Five days after the operation the patient struck her own eye Irido cyclitis followed and the eye was enucleated one month later Although the patient distinctly stated that she hit her eye, it is possible that the pressure and consequent injury to the iris at the time of the operation may have been the principal or sole cause or the trouble

Case 30 —Tindall M , aged 62, senile right eye, motion, perception and projection fair Extracted two weeks after iridectomy Lens adherent, removed with hook, some vitreous was lost Plastic iritis and occlusion of the pupil followed

Case 60 —M , aged 58 Senile bilateral R M One week after operation dressings were removed by patient during the night The wound reopened and caused some prolapsus, which was excised Good recovery resulted with fair vision

I much regret that in my notes of cases more details are not given When I began to operate I was guided and much influenced by V Arlt's teaching, that vision was the *one* object, and he said (Knapp's Archives, Vol x), "Were I to be operated on for cataract I would rely on that method which, on the whole, assures the greatest chances for recovering vision—more or less good vision, and all that sort of thing, is secondary so far as concerns the choice of method' Certainly with the majority of those operated upon and here reported, vision of any kind was the great object Yet I am confident, if care and time be taken to avoid complications, and the patient is kept under observation for a few weeks to determine whether discission may be necessary or not, good vision can be secured just as easily as moderate In reviewing the cases, two weeks was the average time intervening between the preliminary iridectomy and the extraction I have omitted in this calculation those cases where iridectomy was done to hasten the ripening of the cataract The average time of each patient in hospital was about one month Many were kept longer than absolutely necessary, as they came from a distance and it was considered best to keep them long enough to fit them with glasses and also to perform discission should it be advisable A few living in the city were discharged from the hospital from two to three weeks after the extraction The average age was 60, varying from 14, pyramidal cataract, to 85, of which latter there were several The cases 14, 23, 29 and 30, four in all, were failures, and failures much to be regretted as they were all preventable Cases 9, 15, 16, 17, 22, 24, 40 39, 41, 42, 52 and 53, total 12, were complicated with choroidal trouble or corneal opacities, and little hope was given that vision would be improved, so that in estimating the number of those who were benefited by operation, these should be excluded In brief, we have in the hundred cases four complete failures One only counts fingers at five feet, partial failure, which would be five failures, 5 per cent Twelve complicated cases, abnormal condition, 12 per cent Twelve cases in which there was no record as to vision, but noted that they made a good recovery, which would mean 20-200 or better, so that we have

12 cases,	1 10 *or better*	13 per cent
4 "	1 10	4 " "
9 "	1 5	11 " '
16 "	1 4 or better	19 " "
12 "	1 3 or better	14 " "
21 "	1 2	24 " "
7 "	2 3	8 " "
2 "	1 1	2 " "

I desire to express thanks to Dr L Weber, resident physician, who kindly aided me in arranging the above cases

DISCUSSION

Dr W T **Montgomery**, Chicago —It is only in very exceptional cases that I make a preliminary iridectomy I do not perform extraction under two weeks from the time of the first operation If the conjunctiva is healthy I do not use the bi chlorid solution, 1 5000, because it so frequently produces decided irritation Instead I irrigate freely with boric acid solution before and after operation I prefer the speculum to any assistant to keep the lids separated during an operation I do not make the corneal section so large as recommended by Dr Ware, but it is better to make it too large than too small If the patient has useful vision in one eye I only bandage the eye operated upon and allow the patient to sit or recline in a darkened room If the eye is comfortable the first dressing is not disturbed until the second or third day and as a rule I substitute a shade for the bandage on the sixth day

Dr A C **Corr**, Carlinville, Ill —I am of opinion that in all operations in which an iridectomy is to be made that it should be preliminary from the fact that it is not complicated with the dangers of the manipulation of the extraction, and on the other hand when the extraction is made it is not complicated with the dangers of an iridectomy I regard the preliminary iridectomy as very important and necessary to an ideal operation The teachings by professors and the books is almost all against the preliminary iridectomy, and it should not be so

Dr J A **White**, Richmond—If you are working only to secure to the patient every possible chance of vision, it is advisable to do a preliminary iridectomy in every case It is not always practicable for the reason that the longer you extend the time of treatment the more trouble you will have from the patient who wants to get through the case as soon as possible You should have as large a section as possible so as to have an easy extraction of the lens It should be as large as can be, even to the extent of one half of the cornea I always make mine two fifths of the cornea, keeping entirely within the corneal tissues As to antiseptics, my method is to prepare the patient the day before I intend to operate I first have the face thoroughly washed with soap and water, then sterilize the skin about the eye with solution of bichlorid 1 2000 It is impossible to thoroughly sterilize the conjunctiva, but we are not afraid of producing irritation with bichlorid After the washing we introduce into the conjunctival sac a 1 3000 salve of bichlorid, and then sealing up the eye leave it until the next day If there is any secretion present when the eye is opened we do not operate During the operation we use the instru ments sterilized with bi chlorid It has been my experience occasionally to remove the whole lens with the forceps on catching the capsule If I find any difficulty in delivering the lens I give the patient the benefit of an iridectomy so as to make the delivery free and easy I have found the cortex remaining was not so dangerous as supposed It is nearly always absorbed and I would rather take the chances of a secondary operation than to prolong the time and subject the patient to extra danger Since using the forceps I have had better results and have done fewer secondary operations I do not approve of permitting the patient to walk about

Dr H B Young, Burlington, Iowa—As a result of iridectomy, either preliminary or at the extraction, is it not possible that the stump of the iris is more often incarcerated in the wound than we commonly suppose? As one of the complications of cataract extraction I would ask for information as to the occurrence of acute glaucoma In one of my cases where atropia was used as suggested by Noyes, acute pain appeared twelve hours later with the usual symptoms of acute glaucoma Instillations of eserin were used and a good recovery made

Dr A W Sterling, Atlanta—I have had under my care one case of glaucoma secondary to cataract extraction One dozen or more of these cases recorded have been investigated by Nordenson, and he found the causes to be chiefly prolapse of the capsule or the vitreous When they appear suddenly they are usually due to the healing in the wound of a bit of capsule which blocks the flow of the fluid The case I had was due to secondary needling after extraction When the needles are pulled out too rapidly a little vitreous may escape with the fluid and, becoming fixed, pulls forward the contents of the eye and blocks the angle

Dr G C Savage—The ideal operation has not yet been perfected, that is, the extraction of the lens in its capsule without iridectomy If some man will devise means of separating the lens in its capsule from the suspensory ligament, the operation will be complete I always commence with the intention of doing a simple extraction, and regret to have to perform the combined operation I have the things ready, and often have to do the combined operation I want a large incision to include as much as one half of the circumference

Dr A W Calhoun, Atlanta—I do not know that we have cataract in this country more than in other portions of the world, but we certainly operate more I have operated upon 1,300 cases within the last twenty years I formerly commenced with the intention of doing a simple extraction, but I now prefer an iridectomy I very rarely have occasion to do a secondary operation I take a great deal of trouble to get out all the cortical substance and usually have a very clear pupil Previous to the use of bichlorid I thought I was doing very well if I had 95 per cent of successes, but with its use I rarely have any trouble whatever I use it in the strength of 1 to 10,000, washing out the sac before, during and after the operation, in fact, keeping the field perfectly flooded with the solution I see my patients twice a day for the first week I keep them in their rooms longer than is the custom I have lost probably not more than one case in the last two or three hundred I do not always get 20 20 vision, but 20 200 is very good vision and enables the individual to do ordinary work I used to think that a little loss of vitreous was a serious thing, but I have found that a slight loss amounts to nothing The only danger is that when once started, you can not predict where it will end In some cases I have imagined that it proved of service, for it broke up the posterior capsule and left a window there I always endeavor to avoid such a thing I use a very weak solution of cocain, ½ per cent, and it is just as satisfactory as the 4 per cent solution

Dr R L Randolph, Baltimore—It has been shown that the weak solutions of bichlorid have no effect upon the organisms The action of these solutions is not killing but getting rid of them mechanically, and we will have just as good results, if we boil the solution, whether it is bichlorid, salt solution or plain water I boil my instruments, except the knife, which is kept in absolute alcohol until ready for use, then washed in boiling water A solution strong enough to kill germs will produce irritation I have operated on 160 or more cases, and my best results as regards vision have been those in which preliminary iridectomy was performed

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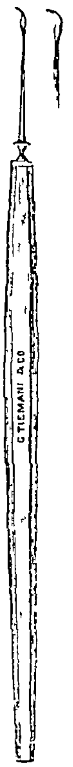
A NEW KNIFE FOR SECONDARY CATARACT

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY A J ERWIN, M D
MANSFIELD, OHIO



In presenting a new instrument to the American Medical Association it becomes necessary to show that such an invention is needed to fill a want It seems to me that heretofore we have not had an implement for the convenient removal of the opaque capsule, or so-called secondary cataract Often, on account of its flaccidity or toughness, the ordinary needling of the capsule will not clear the pupil We are frequently obliged to open the eye and remove the capsule with the forceps The knife that I herewith present is about the size of the smallest discission needle It is curved about 50 degrees on both the edge and the flat, with both edges and point sharp Its action is somewhat corkscrew-like By a rotary motion of this knife one can tear the capsule into fragments if necessary, or draw it to the corneal margin and extract it I have found it a very useful instrument It was made for me by George Tiemann & Co, New York

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ACUTE NON-SYPHILITIC CHOROIDITIS IN YOUNG ADULTS

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY HIRAM WOODS, Jr, M D
ASSOCIATE PROFESSOR OF EYE AND EAR DISEASES, UNIVERSITY OF MARYLAND BALTIMORE MD

It has frequently been noted that of all eye structures the uvea is most apt to show systematic disease The iritis, cyclitis and choroiditis of syphilis and rheumatism are matters of daily observation The liability of the iris to become inflamed, in gouty subjects, after such slight trauma as simple cataract extraction, makes one chary in pressing operation upon such persons The choroid is the favorite place for ocular tuberculosis Metastatic infection from sepsis, typhus, typhoid and, more rarely, remittent fevers, from cerebro spinal meningitis, most commonly appear in the choroid Now and then one reads of functional disturbances in the iris or ciliary structures, attributed to digestive or sexual disorders Again, *it is from primary choroidal growths that* metastasis is most apt to result When one examines treatises upon diseases of the eye for the etiology of choroiditis, he finds comparatively little As a rule, after a more or less thorough description of the appearance of the exudate, clouding of the vitreous, floating opacities absorption of infl [illegible] aterial with restoration of function, or [illegible] lopment of atrophic areas with heaped-up pigment, producing scotomata, one reads "The most common cause is syphilis, inherited or acquired Sometimes *no definite cause can be assigned Exceptionally*, choroiditis is associated with malnutrition, scrofula, chlorosis and anemia" This is copied from the recent edition of Juler's book and is a fair index of others That routine office examinations reveal old choroiditis not due, so far as can be discovered, to any of the commonly accepted causes, can not, I think, be denied Exclusion of syphilis, inherited or acquired, is not always easy Lesions, characteristic of the disease, excite doubt concerning the history rather than stimulate search for less common or doubtful causes All of the cases narrated below are open to this objection Careful inquiry was made, and the presence of an eye disease, thought to be usually due to syphilis, but not essentially characteristic of it, was the *only reason for suspecting its presence*

During the past eighteen months I have seen in private practice five cases in the acute stage of the first attack, and two undergoing relapses of old choroiditis Five were in females, two in males Their clinical history is appended

RELAPSING CASES

Case 1 —Miss D , 27 years of age, seamstress, was referred to me in February, 1896 For six weeks the right eye had been defective with constant floating clouds Vision was 10-200 Ophthalmoscopic examination revealed muddy vitreous with floating specks, an area of choroido retinal exudate, to the temporal side of the fovea, while more externally was a mass of pigment suggestive of a former attack She had fair health save in one respect, menstruation Since its commencement at the age of 15, this function had been irregular Sometimes six or eight weeks would elapse between periods About Christmas *after several days hard work and on the third* or fourth of menstruation, she noted the eye symptoms Improvement has been steady and distant vision on April 24 was 20-40 There is still some vitreous clouding

Case 2 —Miss E D , 21 In 1888, when this young lady was in her 13th year, I attended her for left purulent ophthalmia How the child contracted this disease was difficult to explain, though later her family physician attributed it to infection from a servant, who, he had reason to believe, had gonorrhea at the time The eye recovered with a small peripheral corneal scar If there was any choroidal disease, acute or chronic, my ophthalmoscopic examination did not reveal it In 1892 she consulted me again for asthenopia Correcting H As she obtained 20-15 vision in each eye At this time when she was 16 years old, I found in the upper and inner quadrant of the left eye a patch of choroidal atrophy The family history was good, the girl's health perfect, and had been since 1888 Menstruation had, in the meantime, been established Later, in 1892, Miss D consulted me for "floating specks" and dim vision in the left eye The vitreous was found slightly cloudy and vision 20-40 This attack had come on suddenly during a menstrual period She soon recovered This past winter she has had a similar experience At neither time was there a fresh exudate but vitreous clouding and floating opacities were unmistakable

PRIMARY CASES

Case 3 —Miss G , 21 years old, a robust, athletic young lady, called April 14 On March 14, she suddenly lost the sight of the left eye Vision was 20-200 on April 14 The vitreous was cloudy, and examination difficult I was able, however, to see the retinal vessels, hidden in part of their course, with a grayish yellow choroido retinal exudate at the temporal side of the fovea There was no hemorrhage I learned that on the morning of March 14 menstruation had appeared Miss G had never remained indoors at such times and took an unusual amount of exercise that day During that evening she had a severe headache, and found that her sickness had ceased Shortly afterward the dimness of vision was noticed Menstruation reappeared the following day, and she had expected the eye would soon get better To day (April 29) vision is 20-100

Case 4 —I am somewhat doubtful about the diagnosis of this case, but its history, and the ophthalmoscopic picture justify its narration

A lady, 22 years of age, apparently in perfect health, was brought to me in March, for an explanation of blurred vision in the right eye Visual acuity was 20-50 right, 20-15 left, the former unimproved by glasses A week previous, toward the *close of menstruation, this had been noticed Slight* haziness of the vitreous with a blurred appearance of the fovea a small deep red, sub retinal spot, apparently a hemorrhage It slowly disappeared, and in three weeks vision was 20-20

Case 5 —Mr E , 25 years of age, lost sight in right eye suddenly in September, 1894 Vision was barely perception of the moving hand Densely clouded vitreous, blurred retinal vessels and an area of foveal choroido retinal exudation were easily seen The case has resulted in a central atrophy with scotoma Eccentric vision now is 20-70 Mr E is an active man He is entirely free from any of the recognized causes of choroiditis The only associated condition I could discover was a tapeworm He said that several ineffectual attempts had been made to dislodge this tenant Except at these repeated therapeutic onslaughts, his intestinal possession had not worried him He has, I believe, recently gotten rid of it

Case 6 —Mr R , 33 years of age, was sent me February, 1896 For two weeks right vision was blurred It was 20-50 A choroido retinal exudate in the upper and inner quadrant with *hazy vitreous explain his symptoms This is slowly under* going absorption On April 30, distant vision was 20-30 Mr R is in active business involving large responsibilities He enjoys good health, but has recently suffered from what he terms "nervous dyspepsia," occasionally washing out the stomach. I could find no other disturbance Tuberculosis and syphilis seemed positively excluded

Case 7 —J J , 27 years of age, was sent to me in September, 1895 Vision in the right eye had become suddenly blurred ten days previously Mr J was an engraver by profession and in robust health In the lower nasal quadrant there was a yellowish white exudate, associated with muddy vitreous and floating opacities Vision was 20-60 A scotoma was easily located in upper temporal field This has remained, corresponding with the atrophy in lower nasal fundus Central vision now is 20-20

Treatment in all of these cases followed the usual lines Purgation and diaphoresis in the early stage, with leeches in one Case 5 Later tonic, alterative remedies were administered, as iron, corrosive chlorid

There is a more or less general recognition of functional relation between the eye and the female pelvic organs That affections of one can influence the functions of the other is seen in the eye symptoms, sometimes occurring at the menopause, and less frequently at menstruation Some gynecologists recognize the need of correcting "eyestrain" when refraction error exists, if certain forms of uterine disease are to be cured Dr Moseley has recently called my attention to a paper by Dr Matthew D Mann of Buffalo, read at the Baltimore meeting of the American Gynecological Society in 1895, setting forth this necessity These reflex disturbances, interesting as *they are, do not, however, belong to my subject*

Less generally an inflammatory condition of the eye caused by pelvic disease is recognized The following from Soelberg Wells (p 329), presents it better than I have found elsewhere

"An important exciting cause of idiopathic cyclitis, especially of the serous form, is found in disease of the uterus accompanied by disturbance of the menstrual function DeWecker thinks this is the reason why spontaneous irido-cyclitis occurs with so much greater frequency among women than men The restoration of the menstrual flow in these cases exerts a beneficial influence upon the ciliary inflammation Pregnancy often causes relapses in cases of old chronic cyclitis In girls from 16 to 20 years of age a mixed form of serous and plastic irido-cyclitis or choroiditis is frequently encountered, almost constantly associated with either amenorrhea or irregular menstruation and chlorosis This form of inflammation is also not an uncommon complication of the menopause, especially in those women in whom the climacteric period comes on unusually early"

Trophic changes through reflex nerve influence, metastasis, or a third trouble acting as common cause suggest themselves as possible explanations Dr Mann (loc cit) speaks of insufficient urinary secretion and lithemia as possible causes of pelvic disease He traces this not infrequently to intestinal troubles In all of my cases urinary examination was negative, but considering the liability of the uveal tract to inflammation in gouty or rheumatic subjects, one thinks of the possibility of the same cause producing both eye and pelvic disorder The frequency with which we find evidences of old choroidal inflammation, of which the patient can often recall nothing, and the identity of the ophthalmoscopic picture resulting in cases we treat, with that found in untreated cases suggests the question of the value of therapeusis Vitreous clouding causes visual defect When this clears, the patient has recovered or been cured just in proportion to the absorption of the exudate, or the distance of the resulting atrophy from the fovea Syphilitic cases, it is recognized, promise best from a therapeutic standpoint, but even here it is from relapses that we aim to save our patient, rather than from the natural result of the lesion present In so-called idiopathic cases, if associated troubles of any kind can be found in a considerable number, etiologic relation is suggested To find and remove this factor, if possible, should be the aim of treatment

816 Park Avenue

IDIOPATHIC CHOROIDITIS

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga , May 5-8 1896

BY ADELINE E PORTMAN, M D

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WASHINGTON D C

Idiopathic choroiditis is a subject on which we find, in text-books, almost nothing to aid in diagnosis of the disease which has had so little investigation by the busy oculists of the present time

As you know, the choroid consists of the vascular parenchyma, an exterior coat of endothelium upon its scleral surface, and the *lamina vitrea* Upon the latter lies the pigmented epithelium which is assigned to the retina, though it always suffers when the choroid is affected The blood supply of the choroid is from two groups The capillary vessels, which lie nearer the inner surface, and the venous to the outer The chief blood supply is from the short, posterior ciliary arteries After entering near the optic nerve and piercing the sclerotic they pass into the choroid, then branch, forming the capillary network of the choroid, ending in the indented margin of the *ora serrata* Long posterior and anterior ciliary arteries send small branches to meet these vessels The venous blood, collected from the capillaries into the *venæ vorticosæ*, leaves the eye through the sclerotic The parenchyma has an abundant nerve supply from the long and short ciliary nerves and a network of pale nerve fibers in the choroid which accompany the blood vessels and have many ganglionic cells They end in the capillary layer From the abundant nerve and blood supply we understand how rapidly an inflammation can extend, and why it must always be considered a grave condition

It is doubtful if hyperemia of the choroid can be demonstrated or diagnosed by the ophthalmoscope, for in long neglected ametropia uncorrected, and in prolonged eye strain we observe a flannel-red appearance Idiopathic choroiditis has no subjective symptoms, there being pain only in the purulent forms, or where there is iritic complications The disturbance of vision is in direct relation to the situation of the lesion and amount of atrophy In the period of progression all stages, from the first yellowish spot of exudation to complete atrophy, may be seen

The ophthalmoscopic signs which distinguish choroidal opacities from those of the retina, are that the retinal exudation spots have a more brilliant color, their opacity denser and their contour is defined by very fine radiating striæ, which correspond with the direction of the nerve fibers, the vessels are tortuous and partially disappear under the opacities The vessels pass freely above choroidal opacities, without change of appearance, the exudations show a dull yellowish reflection, the atrophic spots are brilliant, marbled, bluish, due to the denuded sclerotic Instead of a dull red ground, large vessels may be manifest as reddish and yellowish-red stripes, forming a lace work, between which are dark, intervascular spaces lozenge-shaped, caused by absorption of the pigment and capillary layers In certain instances this condition is physiologic and is commonly seen in the space downward and inward from the disk The large vessels of the choroid stroma pass in a sinuous manner across the eye ground, bringing into distinct relief the pigment connective tissue cells of the choroid proper, which lies beneath them We also find this condition in myopia and in the so called stretching eye, where hyperopia is becoming myopia in glaucoma, and is at times associated with pigmentary degeneration in retinal diseases This atrophy of idiopathic choroiditis does not disturb the vision necessarily, at first, to any appreciable extent, though complete loss of visual acuteness is the ultimate result Usually the gradual diminution of visual power creeps on so insiduously, that the patient only becomes aware of it after it begins to interfere with their usual vocation, and by an attempt to have glasses fitted to improve failing vision Nettleship gives accounts of what he calls "generalized choroidal disease," in persons who have not had or inherited syphilis, but believes it due to scattered hemorrhages into the choroid, occurring repeatedly at different dates, leading to patches of atrophy with pigmentation, which he has found mostly in young males Hutchinson claims that a disseminated choroiditis affecting both eyes is found occasionally, as a family disease, independent of syphilis, and connected with diseases of the nervous system To this class of cases, of nervous origin perhaps, belong the cases found among the overworked the physically enervated man, the slaves of the everlasting day-book and ledger in large business houses, where long years of close, hard application added to the ever growing demands of a family that brings an ever increasing worry, where little exercise and less fresh air combine to sap the failing strength and low vitality, also that class of overburdened women who have spent their lives in the hardest work, the mothers of large families, who from rapidly repeated pregnancies and overstrained system, in vainly trying to bear the endless burdens their lives impose, have exhausted all [illegible]erve of [illegible]hysical and nervous force they may [illegible]hemselves at the menopause with [illegible] nd a mental balance trembling on the verge of insanity

Again, among the old, who have been exceptionally healthy and strong during a long life, find the vision growing strangely dim, in whom there is no cataract, who go from one oculist to another in a vain attempt to get glasses to improve their sight, we find the large patch of choroidal atrophy, usually near or partially including the disk, a condition of old age apparently But not only in the old and middle-aged do we find this sad enemy, for Magnus in 1886 made a report giving the results of his investigation of sixty-four institutions for total blindness The number of those affected with idiopathic choroidal disease under 20 years of age in the 1,060 examined was 75, while in the 551 cases of congenital amaurosis were 48 due to the same cause It also appears frequently in the 2,528 cases reported by Schmidt-Rimpler, Hirshberg, Magnus, Landesberg, Seidelman and Katz, 276 were of idiopathic choroidal disease, showing it to be an enemy of all ages May it not be possible by a careful investigation into the cases that are met with before much destruction has taken place, to arrest its progress and thus save the few who can be benefited? Let us remember that all choroidal diseases are not specific and should not be treated as such May not continued attention and watchfulness save the most valuable faculty we have, to some few at least? And though this form of choroiditis may be the result of a dyscrasia, so is trachoma, but that does not make trachoma any less a disease

DISCUSSION

Dr **Herbert Harlan**, Baltimore—I have seen quite a number of cases, and have now one under treatment in a very healthy young woman, who, while there is no suspicion of syphilis, has taken one sixth of a grain of bichlorid of mercury hree times a day for several months, and her vision has nproved from light perception to 15 100 A great deal of good an be gained from treatment, but the prognosis must be uarded until the fundus can be made out

Dr **H B Young**, Burlington—I have recently seen two ases *One was benefited by potassium iodid, the other was* ot My impression was that the origin of the disease was ncestral

Dr **D S Reynolds**, Louisville—If there is any cause for *disseminated choroiditis other than syphilis, I am entirely* unacquainted with it

Dr **B A Randall**, Philadelphia, Pa —We are generally correct in contrasting clinically the minor conditions of choroidal irritation with those of unmistakable choroiditis that leaves permanent scars, but no absolute pathologic line can be drawn between them

Dr **A E Portman**—Many cases have been reported by Drs Argyle Robertson, Hutchinson and others, believed by them to have no specific connection Research, however, in this line can do no harm

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THE OCCURRENCE OF OPTIC NERVE ATROPHY IN GENERAL DISEASE

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Being Report of the Chairman of the Special Committee appointed to report upon "Optic Nerve Atrophy of Obscure Origin" for the Section on Ophthalmology of the American Medical Association, Forty seventh Annual Meeting, held at Atlanta, Ga , May 5–8, 1896

The origin of most cases of optic nerve atrophy is certainly obscure There can be no doubt, when the amblyopia and characteristic disk changes follow traumatism, peripheral disease, or there is positive diagnosis of cerebral disease, or following the continued action of some virus or poison in the system, that is known to affect the optic nerve The occurrence of optic nerve atrophy in general disease always brings with it doubt as to the causative relation The statements of patients are unreliable especially as regards nature, duration and severity of preexisting diseases and an element of doubt is always attached to the relation of such a chronic process as nerve atrophy which may have begun months or years after an apparently well authenticated cause

The atrophy may involve the whole structure of the optic nerve for its whole length, or may be complete in only a portion, it may effect a part of the nerve fibers, in their whole length or only such a portion as the maculo-papillar bundle Signs of degeneration may come on so quickly that the disease may be deemed acute, the majority of cases, however, are characterized by slow changes and do not tend to recovery and hence are truly chronic The latter class shows few signs of inflammation, although I believe, in the beginning that it may be generally possible to demonstrate inflammatory changes at the disk, in the shape of slight haziness and blurring of the nerve head, especially its edges, and of increase in the size, tortuosity and number of its small blood vessels A large number of cases follow high grades of inflammatory conditions of the nerve and retina, such as occur in neuro-retinitis and choked disk

It is difficult to decide whether some cases are due to or simply coincidental with the preceding trauma, local, cerebral, spinal, toxemic or general affection, which may be followed by atrophy of any part of the nerve from the visual centers to the disk, but the result in any case is eventually seen as a wasting away of the nerve elements The disk loses its normal rosy tinge, the circulation is reduced in amount, in advanced cases is marked by a cupping of the nerve end, especially on the temporal side In all cases the first symptom is loss of visual acuity followed by more or less concentric contraction of the visual field, with perhaps defects and disturbances of color perception Where blanching of the macular fibers only appears as in axial or partial atrophy, central or ring scotomata are seen The color of the disk may vary from a pure white, as in primary or simple progressive atrophy, to grayish as is seen after neuritis Bluish or greenish shades commonly appear after spinal lesions and sometimes pigment deposits occur in the nerve Glaucomatous disease results in atrophy of the fibers and here the discoloration is frequently marked

In addition to considering optic nerve atrophy with constitutional and infectious diseases I shall discuss affections of the digestive, respiratory, circulatory, urinary and sexual organs with diseases of the skin and those cases which are supposed to be congenital and those which for want of a sufficient apparent cause will be termed idiopathic

1 *Diseases of the Digestive Organs* —Disordered digestion and assimilation with attendant defective nutrition are factors in many general and local diseases Infectious diseases may leave in their train such conditions of the digestive tract, which act apart from their toxins in producing effects on the trophic centers and nerves I have observed simple white atrophy for which I could give no other cause than chronic catarrhal gastritis and the uric acid diathesis Blindness and subsequent atrophy has been noticed after profuse diarrhea Intestinal hemorrhage has

been followed by white atrophy. In retinitis pigmentosa and hemeralopia secondary atrophy of the optic nerve follows. This condition has been ascribed to co-incident liver disease, but in no case has there been a sufficient warrant for ascription of a definite connection between the two. It is certainly more probable that hereditary syphilis is the cause of these conditions.

2. *Diseases of the Sexual Organs.*—Excessive sexual indulgence and masturbation have been reported as causes of this change in the optic nerve. Amenorrhea and sudden suppression of the menses with vicarious hemorrhage into the nerve sheath is a probable cause of several personally observed and other reported cases. The disturbances attending the menopause in a subject inclined to arterio sclerosis, have developed the condition. Pregnancy may develop a preexisting tendency to eye or general disease. Although uremic blindness is usually temporary, repeated attacks occurring in the same or successive pregnancies have been known to result in permanent atrophy. Nephritis of pregnancy with accompanying, so called albuminuric retinitis has been followed by the same result. Parturition and childbed offer peripheral causes, such as hemorrhage into the nerve sheaths or centers. The mother is exposed to local and general infection and the child to direct injuries which, in the case of the latter, may be the cause of some of the congenital cases. Auto-intoxication from lactation has been reported as a cause of optic neuritis followed by partial atrophy.

3. *Diseases of the Respiratory Organs.*—The adjacent nerve, chiasm or tracts may be implicated in diseases of the sphenoidal sinuses following disease of the nose, causing blindness or diminished vision with defective fields. Optic atrophy has followed pneumonia and repeated operations for empyema.

4. *Diseases of the Circulatory System.*—In anemia and plethora the eye is seldom directly affected, for the amount of blood in the eye may often be the reverse of that in other parts. The quality of the blood, however, is certainly a factor in nutrition of the eye and nerve. Thus, vascular affections may become harmful through the chronicity of their course and produce optic atrophy long after the cure of the original disease. We sometimes see cases of anemia and chlorosis with heart lesions, which may be a sufficient cause for the nerve disease, either through the results of embolism or hemorrhage or through malnutrition. Hemophilia, epistaxis, hematemesis and general hemorrhage have been followed by atrophy.

Arterio-sclerosis, atheroma and fatty degeneration of the blood vessels occur in certain general and specific diseases and are directly responsible for defective nutrition or hemorrhage into the nerve or sheaths, which results in atrophy. Vascular diseases which cause embolism or thrombosis may give rise to atrophic patches in the choroid or the retina with secondary partial degeneration of the optic nerve.

5. *Diseases of the Urinary Organs.*—Twenty per cent. of all cases of Bright's disease suffer from albuminuric retinitis, which, after resolution, will be marked by more or less atrophic changes. Double optic neuritis followed by partial atrophy has resulted from retention of the urine in a case of acute nephritis.

6. *Infectious Diseases.*—Both the acute and chronic infections act mainly upon the blood vessels, which, in many cases, are indirectly changed a long time after the first infection has passed away. Such lesions are of a simple atrophic and not of an inflammatory character and may occur in the brain, spinal cord or peripheral nerves. When the course is acute and the eye is soon affected, inflammatory changes or hemorrhages occur in other parts of the eye as well as in the nerve. Some of these are purely mechanical, as in the case of violent coughing or vomiting. When the course is less acute the virus is expended, apart from the vessels, upon the interstitial connective tissue, while the parenchyma remains healthy or is involved only in the stage of reaction of the interstitial process.

In rheumatism the deficient action of the kidneys and defective elimination of uric acid produce changes in the blood vessels which affect the nutrition of the optic nerve. So also in arthritis deformans, podagra and muscular rheumatism, atrophy may result. These conditions cause glaucomatous disease which eventuates in optic atrophy. Measles and scarlet fever aside from nephritis, typhoid fever, cholera, pertussis, parotitis, dipththeria, beri-beri and pellagra are occasionally responsible for optic nerve atrophy, while influenza is a fruitful source of blindness. Malaria is a cause of atrophy, though some of the cases reported may have been due to quinin. Syphilis is one of the commonest causes of optic nerve disease. It either affects the nerve directly by the lesions it produces in the nerve or its sheaths, in the chiasm or the tracts, in the brain or spinal cord, or by disturbances of nutrition, these conditions give rise to neuritis, retrobulbar neuritis, thrombosis or degenerative changes in the nerve, or indirectly through the changes which occur in tabes and allied diseases resulting from syphilis.

The tertiary stage of syphilis causes interstitial changes in the peripheral nerves including those of sight. Gummata of the brain may produce peculiar defects of the visual fields with atrophy. I have noticed monocular hemorrhage and retinitis followed by optic atrophy in congenital syphilis.

Epidemic and other cerebro spinal meningitis has been followed by atrophy of the nerves of sight.

7. *Constitutional Affections.*—Although we may find atrophy of the optic nerve in some cases of tuberculosis and scrofula and despite the fact that these conditions are extremely common, no proof has yet been adduced that they are capable of causing atrophy in other ways than by affecting the general condition. Diabetes may set up retinitis, neuro-retinitis or retrobulbar neuritis with secondary atrophy of the optic nerve. Exophthalmic goiter, myxedema and leukemia have been accompanied or followed by atrophy of the optic nerves. One of the most constant symptoms of acromegaly and megalocephalia is optic atrophy.

8. *Congenital Optic Nerve Atrophy.*—Many cases of hereditary atrophy have been reported. The blindness usually commences at puberty or during early adult life. The actual exciting causes of the amaurosis may lie in some of the foregoing diseases or in alcohol or other toxins. They are certainly of doubtful origin, although we are inclined to believe that the original cause of some of them is due to anatomic changes in the sphenoid bone which produce pressure on the optic nerve or to the mechanical influence of dilated and calcified vessels which ensue later in life and are associated with certain forms of atrophy in old people.

9. *Diseases of the Skin.*—We may un

stand how diseases of the skin give rise to conjunctival and corneal disease from extension by continuity and similarity of structure A case of neuritis with resultant atrophy has been seen after extensive eruptions on the scalp Erysipelas may affect the optic nerve when attended by orbital cellulitis, with atrophy following Enormous thickening of the chiasm and nerve has been found at the autopsy in a case of elephantiasis

10 *Miscellaneous* —Exposure to cold is a common cause given by patients to almost every affection It is possible that this may be the exciting cause of an acute exacerbation of previously existing disease, which may determine optic atrophy Sunstroke, exposure to continuous heat, light and high altitude or climatic conditions are certainly very rare causes We sometimes see cases of well pronounced atrophy in which in neither the history nor in the examination are we able to find a sufficient, apparent original or exciting cause

Conclusions —Optic nerve atrophy occurs in general diseases usually as a result of direct irritation from their toxins causing inflammation with resultant interstitial changes or through necro-biotic changes in the blood vessels affecting the nutrition of the nerve and retina A certain proportion of cases are due to trauma and to actual lesions which cause pressure on the nerve or interfere with its nutrition through ambolic processes Although many cases are of apparently obscure origin, in the majority it is possible to demonstrate a sufficient exciting cause

Note —This paper is but preliminary to another in which about one hundred case histories will be reported

The thanks of the author are due to Drs Risley, Hotz Hobby, Foucher Wilder Zimmermann Wheelock Gould White Spalding and others who so kindly sent examples from their own observation In the foregoing no authorities are credited for literature see complete paper

H V Wurdemann

TREATMENT OF THE INSANE

Read by title in the Section on State Medicine at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

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CHICAGO ILL

Treatment of the insane by our prehistoric ancestry can be inferred from fragmentary early literature and from conditions among existing races that have preserved the ideas and customs of remote periods No precise chronologic statement could be made that would be true for all countries at any particular time, for civilization is a relative matter

In India, a thousand to three hundred years before Christ, the causes of insanity were recorded as due to improper food, overwork, poisons, powerful emotions, etc , deranging the "wind, bile and phlegm," and six kinds of insanity were described, and in attempts at cure chastisement alternated with persuasion and gentleness Elsewhere, at the same time, possession by evil spirits was the generally accepted explanation of insanity, and the afflicted were beaten to rid them of their devils, while priests were presumed to have some power of exorcism

The custom of destroying the weak and defective was very prevalent The early Romans threw their monstrosities from the Tarpeian rock, American savages often abandoned their aged and crippled to the wolves, and promptly destroyed idiots and the otherwise congenitally deformed

Lunatics have been considered by the Mussulmans and some other barbarians and semi-civilized as entitled to special privileges, through a superstitious regard for them, and epilepsy was inconsistently looked upon as both a diabolical and a divine affliction, *morbus sacer*, or sacred sickness, being the term often applied to it The epilepsy of Mohammed added to his religious influence

Egyptian papyri indicate that drunkenness was recognized as a cause of insanity five thousand years ago, senile decay was also described and evil spirits were blamed as causing insanity The Coptic descendant of the Egyptian language has words to express insanity stupor and mental loss

The Bible refers to the feigned dementia of David, Saul's madness and Nebuchadnezzar's mental affliction Herodotus mentions the madness of the Persian king, Cambyses, Sophocles tells of the insane fury of Ajax, and Euripides describes mania and epileptic insanity Plato suggests fines for those who do not properly provide for insane relatives, indicating that such patients were allowed to run at large and were neglected, as was the case in England down to a recent period

Babylonian inscriptions invoked the gods for aid to sufferers from "sickness of the head" Plautus describes senile dementia in a comedy and narrates an instance of madness caused by "black bile Hippocrates, 500 B C , combated the popular idea of epilepsy being a divine disorder and recognized it, as well as mania, melancholia and dementia as due to bodily ailments He prescribed hellebore for insanity Asclepiades sought to induce sleep in the insane by gentle friction At the beginning of the Christian era Celsus advocated "hunger, chains and stripes' for madmen, though there were occasional attempts at cure by music and reading aloud to them Cælius Aurelianus opposed violence to patients, and Galen gave rules for treating insanity as sickness Plutarch describes melancholia of the religious kind, and Horace gave rules for determining the sort of insane who needed interdiction and restraint

It was the custom among Roman ladies to have idiots and imbeciles among their servants, though occasional protests were made against so doing Court jesters were frequently selected from among the deformed or mentally unsound in medieval periods

Early in the world's history organization for other than defensive and offensive purposes was comparatively crude and cruelty abounded on every side Not only were the insane the victims of brutalities to a greater extent than at present, but degeneracy often ran riot among rulers, affording the "insanity of power" mentioned by Italian writers, which raged in connection with epilepsy, imbecility, paranoia and even chronic mania in the imperial families of Rome, Russia, India and other countries, afflicting Julian, Tiberius, Caligula, Claudius, Nero, Heliogabalus, Peter the Great, Ivan the Terrible and Mohammed Toglak, the sultan of India, as well as the founders of the Mohammedan and other sects in Asia and Europe

Through the restraints of his environments and fellows, man is more accustomed to be controlled than he is fitted for the exercise of unlimited power, which favors the development of latent mental and moral imperfections The abominable cruelties perpetrated by some of these insane rulers are equaled only by the sufferings which the insane in all countries and ages have been forced to endure. Probably when merely neglected and permitted to run at large these defectives endured less from the peltings and derision of villagers, with occasional burnings at the stake as witches, than after the commonwealth began to make laws concerning them.

The earliest provision made for the custody of lunatics in England was under the vagrant act of 1744, and the constable of Great Staughton, Huntingdonshire, records an official charge of 8 shillings 6 pence "for watching and whipping a distracted woman." Shakespeare mentions in "Rosalind" the "dark house and the whip" with which madmen were punished.

The sequestration of lunatics as a public necessity had as little reference to the possible cure of such persons as, until recently, the idea that drunkenness was due to a diseased state obtained credence. And the superstitions of the ages found in the gathering together of the insane better opportunities for practicing theories of casting out devils by reducing the patient to extremities through starvation and beatings. Willis, who had charge of the insane George III, advocated fear in the treatment of patients. This royal sufferer's legs were duly blistered and he was dosed with Peruvian bark after the fashion of the day, and the king complained of the severity of his attendant, who is reported at times to have "knocked his majesty as flat as a flounder." Public discussion of this case led to some general amelioration of the insane in England, which was built upon later by Dr. Conolly and the compassionate Earl of Shaftesbury, but not without encountering ignorant opposition, for Conolly and Gardner Hill were denounced by the English clergy for imperiling the community by unchaining lunatics.

Riel among others, described the horrors of German asylums in 1803. Before a parliamentary committee in 1808 it was testified that the insane in Ireland were tied by the arm to a cart and were thus dragged to the asylum, walking the entire distance, however far, and that mortification from tightness of the ligatures caused one in five to lose an arm. The communal and ecclesiastic control of the insane at Gheel, in Belgium, was hideous enough until the State took charge.

Some of the appliances used in restraining and "treating" the insane were the "Belgian" and other cages, wicker baskets, rotary machines, suspended boxes and seats or hanging mats, swings, hollow wheels, the crib, gags and head frames. The douche was used as a means of punishment and sudden plunging into "surprise baths" were in favor at one time to arouse depressed and discourage refractory patients. Most of them, however, were penned up in filthy, close rooms, sometimes of stone with wet floors, freezing in winter and stifling with heat and offensive odors in summer, fed on scanty and coarse food, often sleeping naked on straw and several in one bed. Frequently the poor creatures were devoured by rats if they survived the thirst, hunger and pestilential diseases that carried off many of them. Added to this there was usually brutal supervision. Sometimes convicts were employed to treat them as they pleased, and Esquirol relates how the madmen, goaded by ill-treatment, would watch an opportunity to kill their attendants with their chains.

By very slow degrees the care of the mentally afflicted has been improved. The inertia of governments and the merely temporary influence of exposures with want of general concerted action accounts for much of this slowness. There was fierce opposition roused in 1855 against the investigations in Scotland that were instigated by Miss Dix, and it was by effort out of proportion to results that finally secured a royal commission which occupied two years in examining into and finally reporting upon the cruelties to which the insane were subjected in that country.

In 1788 a Florentine named Vincenzio Chiarugi instituted the renowned asylum of Bonifazio in Italy, as a distinct departure from the inhumanities of the time. Cleanliness, gentle treatment, medical care and the fullest liberty supplanted the universal brutalities in managing the insane. It was ten years later when the chains were struck off the patients at the French Bicêtre through the long pleading of Pinel. He outlined a reform which was improved upon by his successors. Esquirol, in 1818, wrote to the Minister of the Interior: "Nude were the lunatics I saw, covered with rags, stretched on the pavement, a little straw to defend them from the damp cold. I saw them grossly fed, deprived of air to breathe, of water to slake their thirst and of things necessary to life. I saw them committed into the hands of whippers, a prey to their brutality. I saw them in narrow, dirty, fetid receptacles, without light or air, chained in certain dens and as wild beasts are penned in and kept secure." Pinel was suspected by the revolutionists of having a sinister design in asking permission to unchain his lunatics, and a deputy of Robespierre wrote: "Citizen Pinel, to-morrow I come to pay you a visit at the Bicêtre, woe to you if you lodge among your lunatics any enemy of the people."

Passing to our own times we find that an advance has been made toward a *pretense* of care. Formerly it was not necessary to even pretend that humanity was practicable in the management of the insane.

Home treatment of patients is usually difficult or impossible, and as the laws concerning supervision of the insane became more stringent most astounding instances of cruelty and neglect of insane by their relatives were discovered. Imbeciles, idiots and dements were found here and there through the country confined in dismal, small cells, scantily fed and clothed, and their bodily needs otherwise disregarded. On the other hand there are families who are making daily sacrifices in many ways to such unfortunates in their affectionate care.

Small places are not fit for troublesome cases. The long corridors of the State hospitals and the expanse of gardens furnish room for exercise and air, where the privations of a dwelling act prejudicially and compels resort to confinement and mechanical restraint, when all possible and reasonable liberty is everything in the treatment of insanity.

Attendants of the insane as a class are misunderstood and often unjustly blamed for what is most frequently due to the system of management of the institution. Even in the most degraded political asylum several really worthy persons have by some accident managed to be present, but too frequently their lives are made wretched by the perverse element and through their inability to prevent the abuse of patients by others.

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an all too universal disposition to hold them to account for what they do or say "They are not responsible," is daily mentioned by one kind-hearted attendant to another, and in positions calling for so much self-restraint and forgiveness under extreme provocation it is really surprising how well attendants acquit themselves But helplessness and opportunity are sufficient to tempt the brutes that low-grade politicians appoint to asylums

If political control can be minimized and attendants be secured on their merits and promoted as they deserve for efficient service, salaries should be large enough to induce those possessing more than average ability to enter the service, but where the salary is the only inducement to the ruffians who demand reward for political work it is far better to make the salary low, for a better class of attendants in those politically dominated places is thus secured, from among medical students or other persons of good character who seek temporary means of study

The great strain to which attendants are subjected when on duty makes it but just that they should have reasonable opportunities for relaxation and recreation

If the political teaching prevails that it is not wrong to steal public property, employes can not be expected to be diferent from those over them, and while trustees or a business management may felicitate themselves upon their methods of "addition, division and silence," as conducted in safety and secrecy, their workmen claim also political spoils and extend the system to a practical looting of the place, carrying off everything portable at times At Dunning there were "fence houses" and all-night saloons surrounding the county asylum where blankets clothing of patients, tableware, food etc , were taken from attendants in payment for drink and gambling losses

Great differences exist, due to personal excellence of attendants, as to the treatment patients receive In every institution there are instances of life-long friendships springing up between the recovered patients and those who cared for him or her, and the mere presence of a well-intentioned, considerate attendant has often been sufficient to calm the fury that had been caused by the harshness of others

On the other hand, the greatest cruelties were practiced upon the insane at the county asylum by the criminals who were selected to fill the place of attendants, as appears from the Report of the Board of Public Charities, State of Illinois, 1886, page 119, and years later the asylum was worse than ever, and several murders of patients were brought to light judicially

If the medical superintendent were not hampered by demands of politicians for positions to be filled by unworthy persons the decent care of the insane would be greatly simplified As an example of the selections politicians often make it suffices to state that Peter Kelly, a Chicago policeman, was shot by a burglar and became insane from the neck wound inflicted, the assailant served out his time in the Joliet Penitentiary and was appointed as an attendant at the county asylum and was actually put in charge of the ward within which was Peter Kelly, his victim

Dr Joseph Lalor of the Dublin, Ireland, asylum, founded schools for the insane, and he was also an enthusiast on the subject of keeping the patients employed Farm labor is beneficial to both curable and incurable cases, beside being an economic source of supply to the asylum Almost every conceivable occupation is represented in the best managed institutions, and the daily labor of the patients contributes greatly to their welfare and happiness But there are opportunities for abuse of employment in overworking or unsuitable occupations A contractor at the county asylum was allowed to appropriate the patients' labor, and the warden (who later served a term in the penitentiary for robbery) compelled the insane to hard labor against their inclination A patient died of typhoid fever while digging a trench for the warden and contractor mentioned, both of whom resented any medical interference with their control of the insane

Visitors to insane patients often do much harm unintentionally Friends and relatives exert an irritating effect upon the insane in unexpected ways, and calmness has frequently been succeeded by weeks of disturbance after the visit of a well-meaning relative There are times, which the physicians are prompt to recognize, when the patient is made better by seeing his friends, and they are usually notified to come at once upon such occasions Several thousand visitors and pleasure seekers have been known to throng and race through public asylum grounds, especially on Sundays, and the attendants on such days had their hardest work in controlling the patients who were thus improperly disturbed

Several hundred members of the legislature with ladies, children and friends, "visited for inspection" some of the State institutions, taking possession of the place, converting attendants into nurses for infants, holding a banquet in the dining room of the hospital, drinking the dispensary liquors, rioting through the grounds and actually taunting some of the patients into fury The effects of such a visit were observable for months afterward in many injurious ways A small committee of inspection could accomplish all the legitimate work necessary where a rabble did nothing but harm

Attempts to regulate Sunday visiting at a State institution brought a storm of opposition, as the diversion of travel threatened to break up some saloons in the vicinity in which one of the trustees was interested

No institution of the kind should contain more than 300 insane is the universal declaration of alienists and others experienced in the treatment of these patients, but large and still larger asylums are built, as they afford better and still better opportunities for the management of great amounts of money after the political fashion The impossibility of a medical superintendent overseeing so large a place as the average asylum, with one or two thousand patients, affords a pretext to politicians for putting in a "business agent, ' but invariably the double-headed arrangement proves to be a monstrosity, for no layman, even under honest cooperative endeavor, can possibly be aware of the needs of the patients and the place so well as the medical director The insane are sick, and every moment demand the consideration due to sickness that only a physician can give

Every ounce of supplies purchased, every turn of a wheel has reference to the care of patients, not mere boarders or cattle who require nothing but housing, feeding and grooming When a layman has free control of a hospital he is more than liable to ignore medical requirements, as he knows nothing of them and the medical head is humiliated and common decency is outraged by the necessity of constant appeals to ignorance Even when a steward is under the medical management, the latter is often defeated by intrigues of the former What then is to be expected of divided authority, or, worse than all, the medical under lay supremacy? Imagine a judge being dictated to, by anyone, as to what legal books of reference he should purchase, particularly by a politician who, while preaching "economy " pocketed the public appropriations for legal book purchases Most of the lay superintendents of county asylums are purely business agents of politicians in the worst sense of the term Neglect, abuse and even murder of patients flow from such administration as naturally as foul water from a sewer

It is often the case that the purely professional man is a poor business manager, but that is merely because of his devotion to his work, let the same professional man fully realize that in assuming charge of an institution for the sick that he must become a business man and his professional knowledge is be merely a part of intelligent training as to requirements, and the same ability that made him a good physician will also convert him into the efficient business medical administrator, for special ability is nothing more than general ability There will occur differences among individuals as to whether relinquishment of lifelong habits are possible, and with this in view superintendents should always have had previous hospital experience, but there can never be any excuse on the ground of pretended "lack of executive ability" by medical men for the foisting of brutal, rapacious uneducated politicians into control, however disguised as gentlemen they may be

The ' business manager" in some institutions has claimed the right to make purchases of medicines and very inferior stocks of drugs at high prices are pretty sure to result, against which physicians dare not complain at the cost of falling under politicians' disfavor Inert quinin pills containing a little quassia to impart a bitter taste have been found in such stocks, fluid extracts as valuable as so much cold tea, but billed as Squibb's at his 20 per cent advance over usual prices Calomel which required a teaspoonful to equal ten grains, and other evidences of business enterprise in purchasing abound when the "executive ability" of a layman is placed over professional desire to have pure medicines

At the county asylum the warden refused to buy a few dollars' worth of needed medicines on account of their expense, but the next drug account itemized 48 cases of beer, 10 barrels of whisky, 20,000 cigars, and much wine, brandy and fancy liquors were also covered by the item "sundry drugs " The periodical celebrations of the county commissioners and their friends in the dance-hall and dining-room of the asylum necessitated rapid and constant replenishing of that portion of the dispensary stock Five dollars per capita would have covered the amount of meat eaten by 600 insane at the county asylum, yet in 1884 the bills were $15,763 04, and in 1885 amounted to $18 ,934 11, averaging $26 and $31 per patient, while 9 cents per pound was charged for hogs' heads in a filthy condition, some of which held iron rings in the noses Mike Wasserman, one of the convicted boodle commissioners of unsavory memory, when once shown the iron ring in a pig's snout found in the soup of a patient, remarked "Well, what would you have, gold watches?"

The bookkeeping of a large asylum can be made so elaborate as to be meaningless Voluminous ledgers and auxiliary books and records have been known to be pure shams Requisitions supposed to be sent to the storekeeper by attendants were not approved by supervisors or anyone else, and the storekeeper had every chance of misappropriating goods, and under the loose system of issue no proof could be secured of his guilt Small quantities of butterine issued have been charged up as butter in large quantities, the actual ration of some of the dements consisting in forty grains of butterine, one five-hundredth of a pound of inferior tea and a small plate of corn-meal mush, and patients have fought over their scanty fare, the most helpless being often wholly deprived of food

Sixty per cent of the English asylums are maintained at 8 shillings 7½ pence for county and 9 shillings 7½ pence for borough asylums, which cost includes provisions, medicines, clothing, salaries, wages, furniture, and in some borough asylums, repairs At Leavesdon, in 1887, the weekly cost was 7 shillings 5 pence In Scotland the cost ranged from 5 shillings 10 pence to 10 shillings ¾ pence, the extremes per annum through England and Scotland being $72 80 and $125 58, with an average of 8 shillings 7½ pence per week or $107 64 per year

In 1894 the lowest per capita in the United States was $104 at the Tuscaloosa, Ala , asylum, the Southern per capita average of all institutions being $129 23, the Western $166 58, the Northern $173 60 and Eastern $173 42 The average of fifty-two asylums in the United States being $169 15, which is considerably above the cost of maintenance of the English asylums

While the average cost of American asylum maintenance was about three-fourths greater than in England, at the Chicago asylum the per capita in 1885 reached the sum of $270 39 under county commissioners who were subsequently indicted for conspiracy and fraud The Illinois per capita of that year was $174 21 The succeeding year $243,262 33 was expended for about 700 patients, raising the per capita to $347 51 The total county charity expenditures for 1886 was $906,478 34, at least two-thirds of which must have been misdirected on the safe assumption that the asylum per capita was about thrice what it should have been

During the years of the boodle gang control some $10,000,000 of public funds were disbursed, one saloonkeeper was awarded a contract of $150,000 for covering the court-house with a mixture of clay and paint, the cost of which was about $500 The robbery of the insane asylum fund was a small portion of the political division of spoils In 1886 the poorhouse per capita was $200 and the county hospital $373 57, while in all the public charity departments the greatest privations were experienced by the inmates in spite of the vast sums appropriated "Economy" was the excuse of the politicians for the miserable provision made for the sick and paupers

It is with the greatest difficulty that the expense account of county institutions can be approximated Concealment is the rule and in the words of a county commissioner, "the county expenditures is nobody's business " Collusion among all asylum officers is not to be presumed, for many of them are kept in ignorance of financial matters and can only see results in a general way against which they can not protest

Estimating possibilities in the State institutions, it is practicable for $150,000 to [illegible] a [illegible]ed from

$500,000 biennially appropriated for a single institution, through perquisites of $30,000 to the one who heads the division of offices, sometimes a member of the legislature who has controlled a large number of votes for the State election, one trustee, who acts without salary and merely for the honor of the appointment, by diligently attending to the hospital business can secure $50,000, a less influential trustee can save $20,000 by coöperating with his companion in the matter of auditing accounts, while the one whose vote is not needed can be placated with $5,000 The storekeeper has opportunities to earn $10,000 on his $75 per month salary An industrious business manager can net $25,000, the bookkeeper, through occasional opportunities can add $1,500 to his savings, and $8,500 can be secured by others in various ways from the wastage and shrinkage fields of the place The treasurer is openly known to receive the interest on the asylum funds, though there is no legal provision for so doing Probably $3,000 per annum is thus earned, and if in the meanwhile the State is in need of funds it can readily borrow by paying interest

From $2,000,000 annually appropriated by a State for maintenance of its charitable institutions, one-fourth can be abstracted without the knowledge of the State board of charities or the medical superintendents, and without causing much privation among patients, the different funds affording dissimilar chances for discounts

The "stuffing" of pay rolls is not so likely in the State hospitals, particularly when the pay list is published, but in county and city offices of all kinds great sums have been made by placing fictitious or false names or rates of pay on pay rolls of employes An 1896 instance was unearthed by a civil service commission investigation, conducted by attorney Luther Laflin Mills The clothing account can be profitably manipulated, in county asylums especially At Dunning 100 suits would be issued to a ward full of patients, and the next day the same suits were reissued to another ward The friends of patients incessantly complained that the patients were not wearing the clothing brought to them, and the destructiveness of a few patients was made to do duty as an excuse for the disappearance of hundreds of suits

Fuel purchase in some places enables incredible sums to be charged A very superficial examination would result in astonishing disclosures in this field, unless baffled by the opposition usually raised against exposure of any kind

Trustees are ostensibly selected for their business aptitude, public spirit and philanthropy, they receive no pay, and are presumed to regard the honor of the appointment as sufficient recompense Occasionally it happens, after a political overturn, that prominent political workers, for services in securing votes, are rewarded by such trusteeship appointments, and while it is not invariably the case, it too often happens that a four years' term as trustee enables a poverty stricken politician to blossom out as a banker, real estate owner or man of wealth generally

Combinations are sometimes formed among them in such a way as to control matters, and the resentment of the minority rises to threats at times, with the compromise that ensures silence When an indignant trustee resigns and calls his former comrades hard names, you may rest assured he is not satisfied with his share of the profits A $60 a month clerk has been known to spend his entire time at an asylum while acting as trustee without salary, and the loss of his clerkship was taken quite philosophically One of the sixteen county commissioners who were subsequently indicted under what was known as the "omnibus boodle" finding, neglected his small saloon in Chicago to reside at the county asylum altogether He escaped to Canada too soon in his career to have saved much money An Indiana asylum trustee displayed more "executive ability" than the rest by placing $100,000 of asylum funds in his carpet sack and traveling northward, without the preliminary bother of obtaining percentages for asylum supplies from bribing merchants

All asylum trustees are not dishonest, but the system is sufficient to develop whatever dishonesty may be latent in some, through the opportunities afforded

Under the New York State Care Act of 1890, separate institutions for the chronic insane were abolished as pernicious, and Illinois in 1896 erects just such an institution

The death rate in New York asylums has of late years been rèmarkably decreased by regulations that restricted the chances of political stealing

Dr Carlos F MacDonald, the president of the New York State Commission in Lunacy (*Alienist and Neurologist*, July, 1896) relates that the changed system in that State enabled a saving to the tax payers of $300,000 over the previous year The cost of maintenance for the fiscal year 1892-3 was $216 12, and in 1894 the per capita cost dropped to $184 84, a reduction of $31 28 The supervision of all expenses by a thorough system of scrutinizing public asylum expenditures in a business-like manner cut off nearly $500,000 a year from what formerly went to politicians, and the patients now have some of the remainder

All per capitas in the United States are too high in the aggregate, and the insane could live as well on one half of what is appropriated for them, were the politicians' hands taken out of the treasury

A State board of public charities without pay, except for its secretary, has ostensible supervision of accounts in Illinois, but the members have not the time to spare for anything like careful supervision, and are thwarted in every way possible in attempts to thoroughly understand the expenditures In no one of the biennial reports of this board is there evidence that proper access to Cook County public charity expenditures was afforded the board Immediately before the celebrated "boodle trial," which showed the most reckless plundering of the public funds by the county commissioners, the State board reported that the county accounts were correct

The intriguery, waste, extravagance, plotting, rioting, neglect of duty, insolence of employes, disregard of the needs of patients and of medical care, the "doping" of patients by attendants, and frequent instances of personal abuse, the insufficient cooking of insufficient food, with the thorough "cooking" of statistics and accounts, the high death rate and low recovery rate, the crowding of several violent patients in one room, and multitudes of other discreditable affairs, must be witnessed to understand how deep-rooted and arrogant a hold the political spoils system has upon the country

And there would be no bribed were there no bribers The merchants who divide public plunder with politicians, and the citizens who look complacently on, are equally guilty

A physician seeking an appointment to insane asylum service asked a veteran alienist what steps were necessary, and was advised in all seriousness to make the acquaintance of the nearest saloon-keeper

The number of gamblers and liquor sellers who hold offices of all kinds in connection with public charity disbursements indicates the influences at work in American politics When surprise is expressed that such selections should be made, it is claimed that such persons are as honest, capable and deserving as merchants and board of trade dealers, many of whom evade tax paying and seek nefariously profitable combinations with politicians to furnish supplies to asylums, hospitals and poorhouses

The fact remains, however, that there is nothing in the occupations of the liquor dealer and gambler that specially fits them for caring for the public insane and their funds, beyond the mere superior ability to control such appointments afforded by the faulty primary election laws, which legislators would speedily remedy, were it not that their own places would be jeopardized by such changes

But asylum management by such classes is merely a legitimate outcome of the general spoils system operation the helplessness of the sick and insane affording the best opportunities for brutality and rapacity The privations, sufferings and frequent murders of insane patients are strictly logical outcomes of the pernicious system which fills our legislatures, State, county and city offices with gamblers and saloon-keepers, who swagger about in vulgar jewelry and attire, openly congratulating one another upon some recent success in prostituting public and private interests All such matters are familiar to citizens who have the power to make reformations, but do not intelligently combine to make them

Reports of the State Board of Public Charities for Illinois are filled with accounts of the insane in various counties being treated more as animals than as men and women, neglected, abused, chained, locked up in nakedness and filth, no medical or personal attendance, packed in rooms too small for their numbers, with poor ventilation and foul odors, no separation of the sexes, insufficient food, and myriad other such matters are officially mentioned in these reports to the governor and legislature, without influencing the least improvement

The charges sustained in the 1886 investigation of the Cook County asylum were

1 Cruelly insufficient provision for the insane in the county asylum in all respects, when more than ample funds are alleged to have been used by the management of said asylum for the care of the insane

2 Abuse of said insane by said management, said abuse being direct and indirect, by personal violence and neglect

Subsequent to this report to the governor, a county court investigation on the petition of Julia Willard May 13, 1889, was made in which witnesses detailed murders and abuse of patients, their starvation and the brutal nature of the management Patients were made to work for the profit of attendants, their clothing was stolen and sold to saloon-keepers, fighting, rioting feasting and drunkenness of politicians were narrated, with no apparent difference in the conditions since the State board report of 1878, except in enlarged opportunities for brutality In that document the county farm was characterized as full of instances of neglect and ill treatment and that "party politics trading votes and speculating" contributed the chief employment of employes

After the 1889 investigation it was considered safer to give no physician an opportunity to bring matters to light, so a lay warden hires the doctors and keeps them under sufficient control to prevent complaints getting to the public

In 1895, as a sample of many instances, two attendants were on trial in Chicago for kicking a patient to death, an "investigation" was made by the commissioners, who duly whitewashed themselves, and by publishing hundreds of columns of newspaper interviews, and vaporings generally, managed to confuse everyone and tire out the public A New York legislative inquiry into the killing of a patient came to nothing through the report of the committee being stolen

Physicians alone are competent to understand the real wrongs of asylums and even they must reside the greater part of a year in such places before they can fathom the real condition of things, which every ingenuity of political intriguery is invoked to conceal

A favorite resource of politicians when attacked for malfeasance or inhuman violation of trust is in diverting public attention from themselves by personal onslaughts made upon their accuser

Nothing seemingly could be further apart than discussions of gambling and the care of the insane, but the most amazing incongruities are seen in the results of political control of offices The successful manager of politics, "the boss of the machine" in a great city, is often the head of a large gambling resort with a saloon and other immoral accompaniments attached, affording rendezvous for his lieutenants in plundering schemes These "bosses" are great organizers, and exert as complete control over primaries, nominations, elections and office conferring, as though they actually owned the State and its revenues Adepts in manipulating election machinery and playing upon the passions, ignorances, and prejudices of the populace, they have defied attempts at their overthrow and continue to divide municipal and other governmental funds and places among themselves Opposition is crushed in every way by corruption, or discomfiture of whoever is rash enough to attempt reform in a practical way, even to the destruction of individuals Windy addresses on reform measures do not disturb them in the least, they can even make such demonstrations themselves, and in the name of reform increase their power for evil It is when actual interference with their robberies are made whether through interposition in behalf of the sick, insane and paupers whose funds they control, or otherwise, that the hand of the "gang" falls heaviest, and the motives and character of the reformer are assailed Nor is their hesitation over a mere matter of assassinating too troublesome an opponent Political murders have been numerous and successfully concealed, the party who makes exposures is adroitly made to appear in the wrong so as to alienate public sympathy from him if his murder comes to light

In the *Chicago Inter Ocean*, Nov 4, 1884, appeared an appeal from a physician at the county asylum stating the atrocities there and asking "all respectable men to be sure that the county commissioners for whom they voted owed no allegiance to gamblers and thieves'

The doctor was promptly shot at and several other attempts were made upon his life and a [illegible] kept up the fight ten years he was finally pronounced to be insane by politicians in general, and certainly from the standpoint of a community which condones robbery of the helpless, the one who refuses opportunities to steal from them must be out of his environment and practically a crank

The mental construction of most of these politicians is such that they can not conceive of mere professional devotion and enthusiasm A physician who would lay claim to being actuated by a desire to scientifically advance humane measures is looked upon as a brother hypocrite and demagogue Honesty is inconceivable except as defective intelligence The refraining from stealing public funds is considered as mere want of smartness enough to know how to do so

It often befalls that an ousted administration busies itself in inventing occasions for spitework with a view to possible restoration to power, so it is not all accusations against the ins by the outs that can be believed

Deaths of patients by violence afford chances, about election periods, for exposures In such investigations the mode of appointment of all officers and employes should be inquired into as affording ideas of the animus and discipline of the place The incentives of charges and the inevitable counter charges need deep probing, as well as does the construction of the investigating body, its interest in the investigation and liability to bring out the truth or cover it up Deposed administrations have been active in arraigning their successors for real or imaginary misdeeds, and upon rare occasions some one has instituted charges from genuine reform motives, but even these reformers are apt to be jealous of one another and instead of supporting, detract from and disparage each other's efforts

Brutal natures are common enough and it is not remarkable that many of their possessors find their way into asylums as attendants in reward for services performed at the polls for those who appointed them When a murder occurs at an asylum the first question should be *Who appointed the murderer* to his position? and full light should be thrown upon the character of the office giver, to disclose the entire responsibility for the commission of the crime

These weakest and most helpless of humanity are not only liable to be neglected through their filthiness, repulsiveness and burdensomeness but their irresponsible aggressiveness has often aroused the brutal retaliation of the none too patient or considerate savage, who, all too often, happened to be in charge

The influence of the saloon-keeper and gambler in placing these characters where they can safely exercise their low instincts, is easily seen Many liquor dealers and gamblers are as they claim to be, as good as many in other occupations that are regarded more respectable, but from their numbers in official life it would seem that they are considered to be even better

When the liquor business is responsible for so vast an amount of crime, insanity and pauperism, does it not seem cruel that liquor dealers should thus be permitted to chase their victims to the grave?

A phase of the wrongs endured by the insane occurs in the blunted conscience of the people in accepting the misappropriation of public funds as a matter of course and even furthering by their votes a determination of which particular band of plunderers shall have charge of the spoils

The merchant who connives with political spoilsmen to sell inferior materials at extravagant prices to public institutions may carouse with the business agent of an asylum and both find happiness in their divided gains, and the thought that life, health, sanity, has been taken from patients through depriving them of what was intended for their care, apparently does not disturb their commercial minds, but the physician who sees patients dying from drinking sour milk and eating rotten meat and vegetables, and from the want of a few simple remedies, or from insufficient warmth because the clothing and fuel accounts had been manipulated with political "executive ability,' the physician who witnesses such things sees clearly who is to blame for the privations, deaths and horrors all about him, while observing the flashy dress and jewelry of the vulgar feasting politicians who have divided almost openly the money lavishly appropriated by the people for maintenance of the unfortunates

The cohesion of the spoils system in its immense ramifications is almost incredible Its beneficiaries surround public hospitals and branch out into commercial and social life in all directions The demagogue relies upon the true condition of things not being understood by the people at large

All the asylums of America are not badly managed, but the present political system does not encourage humane care of the unfortunates An occasional hospital for the insane is well managed in spite of the prevalent bad system, but there is constant danger of a political change driving out the honest and capable from such places

With civil service reform there should be the greatest publicity demanded for all asylum affairs A visiting staff of specialists should be appointed in spite of the fears of some trustees that the world would thus be too readily informed of asylum shortcomings There should be strict scrutiny of the accounts and a check system adopted that would discourage dishonesty Banks overhaul the books of their clerks and railways multiply checks upon their agents, but with all such precautions the ordinary mercantile and manufacturing organization is occasionally robbed Were the defective accounting system in use in State and county affairs to be allowed by all business men and private corporations failures and industrial wreckage would be universal

Civil service laws properly enforced would be directly instrumental in restoring thousands of the insane to sanity, who, under the present faulty system, are doomed, and further murders of patients by politically appointed brutes would cease When the politicians' profits were reduced by $30 per capita in New York State the death rate in asylums fell greatly and the recovery rate rose

Reforms, as well as institutions, evolve and a more scientific treatment of the insane will come with other advances in the world's affairs But, for the present, we can look for no radical improvements in asylum matters until civil service rules are firmly established therein, which can scarcely be hoped for until the primary election methods admit of honest candidates being secured for all public offices, an achievement which means no more or less than the destruction of the power for evil now defiantly exercised by the gambler and dram-seller

Herbert Spencer says "Any system that confers the rewards for merit upon the undeserving is demoralizing and destructive of social advance," and, "though all efforts for reform are out of proportion to the results, the reformer may take comfort in the knowledge that the little that is accomplished will endure

70 State Street

PERTUSSIS AS A NEUROSIS

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

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The pathology of pertussis has long been in doubt this is well shown by its varied and uncertain therapeutics The definition of the malady is usually based upon its most prominent symptoms—the characteristic paroxysmal cough and consecutive whoop The cause of this characteristic cough and whoop has never been positively located It is said by some to be a local irritation involving the pharyngo-laryngeal space, set up by some external influence, possibly bacterial, some, that in addition the morbid irritant is absorbed through the lymphatics and blood vessels and produce a systemic febrile state, and some that it is a vague commingling of various elements, local and general, physical and nervous, and still others that its phenomena are entirely reflex There is no doubt regarding its infectious nature, but the peculiar mode of this infection is still veiled in uncertainty It may be from exhalations from the vomited matter or expectorations, the breath, the cutaneous surface, or from all

Whooping cough may be, or may not be of bacterial origin It is not yet proven that it is Certainly no bacillus of pertussis has yet been isolated, and therefore no diagnosis can be based upon a bacillus as a factor in the etiology of the disease

Negatively, and practically, no treatment of a purely bacterial nature has been of any avail Whatever benefit that has been derived from germicides has been by abtunding the terminal branches of the nerves supplying the parts involved, or the parts treated, and have only a local effect, without reaching the source of the nerve energy, its prominent feature

On the other hand, the only remedies beneficially affecting the disease are those that have been considered of a constitutional nature, those that have been directed to the nervous element upon which it is believed to be grounded

The subjects of whooping cough are notably those coming from neurotic families They have descended on one side or the other, or sometimes from both of the parental lines, from generation to generation, from neurotic ancestry, through children and children's children, the concentration varying in individual cases

By careful inquiry it will be found that full 75 per cent of the subjects of this trouble are neurotics in the more or less strict sense of the term, by heredity especially, or it may be by occasionally from acquired habit, and when we consider that as many or more escape the disease than contract it, more are naturally immune than susceptible to it, this view of the subject comes out in strong relief and merits our closest attention No stronger proof is necessary to negative its local origin, or illustrate the resisting power inherent in those exposed to its attacks Those who escape are made of different stuff, but those attacked exhibit the nervous characteristics and conditions of typical neurotics in every phase of life—are easily alarmed, are easily depressed, or impressed for good or ill, are easily moved to tears or excited to anger, their sleep is most always disturbed, they suffer from enuresis, impaired or arrested digestion from shock or fright, are easily agitated and prone to convulsions, which are often produced by very slight causes

If pulmonary symptoms are associated with the disorder, death is apt to occur from interference with the respiratory act, through the dominating nervous element It may cause, during a paroxysm, inhibitory spasm, and, compressing the chest walls, induce asphyxial convulsions and death, or by violent action of the heart muscles increase the hyperemia, overfullness, congestion, or cause the complete arrest of the pulmonary circulation, and by sequence the respiration, and death by apnea

Another very important feature of the disease is the possibility that it is sometimes associated with or may lead to glycosuria It is contended at present that this reference is merely one of suspicion rather than one of fact, yet if we survey the whole field of investigation, and the peculiar symptoms of some of the cases we have had under treatment, where the issues were not plainly developed, our suspicions may be more than verified, by a close comparison of the results of such cases with those symptoms referable to glycosuria It certainly does not conflict with the theory of Pavy, that it (glycosuria) is due to want of assimilation, for want of assimilation is due to nervous influences

This feature of the malady has been very largely neglected, overlooked or possibly ignored as of little utility in the examination of cases presented for treatment But you will be surprised to find, if careful and proper examination or inquiry is made, how frequently glycosuria is present in given cases, especially in the severer types of the disease It is not claimed that this condition is constant or permanent It may be transient, and frequently a very delicate test is required to detect it Though the literature of the subject is at present meager, indeed there is none to be relied on, the indications are so apparent that it may be confidently suggested that investigation on this line would lead to profitable and important results

I doubt if one physician in a hundred has had his attention called to this particular aspect of the matter, or if he thinks it worth while to examine the urine of a child under his care, suffering from pertussis He usually takes it for granted that it is a child's disease, has its period of incubation, onset, acme and decline, and watches to see it pass from one condition to the other rather as an interesting pathologic process, than as a disease to be combatted at every step, from center to periphery He is therefore apt or inclined to ignore or disregard all symptoms except those in sight, and limit his therapeutics to the local manifestations, as if they were all of the affection

We do wrong if, in framing our diagnosis, we leave out of view other organs which may be involved, either primarily, or in the course of the disease, especially such vital organs as the kidneys and their function and products, if we fail to discover or decide as to the appearance of sugar in the urine, and its possible occasion of diabetic conditions, as coma, dyspnea, or pulmonary edema, which are generally looked upon as the result of the inflammatory process

Glycosuric phenomena in whooping [illegible] ugh are usually slight and as a gen [illegible] ng [illegible] ver unimportant part in the complications, or, I might say, in the development of the affection, and on that account may be easily overlooked It is usually temporary, as desquamative nephritis is in scarlatina Yet that it may and does occur to a greater or less extent, this is quite sufficient, as said, to emphasize the suggestion and point attention to it, that we may in the future properly consider its probable immediate or remote tendencies and results

Glycosuria is not properly a complication any more than endo- or peri-carditis are complications in inflammatory or articular rheumatism, or, as now taught, rheumatic fever It is a part of the disease, as nephritis in scarlet fever, and pulmonary extension in pertussis and measles, and originates from the same cause, so that in treating a case of whooping cough, it is well to have in mind all the symptomatic manifestations which may be developed in its course—those that are so far well known and appreciated, as well as the possibilities of some others, not perhaps in the category of direct symptoms, but which may be elicited by careful inquiry pursued in the right direction

It may be, therefore, worthy of renewed emphasis that, if glycosuria is eminently and correctly of nervous origin, affecting primarily the nerve cell and its proliferations, no discussion of pertussis with this accompanying symptom of glycosuria can be complete without including the nervous element, at least, as one of its factors

Another consideration worthy of notice is in regard to its therapeutics, that is, that all the best remedies or treatments heretofore instituted for the relief of pertussis, have been those known to have beneficial influence in all diseases of a nervous type, as neurasthenia, hysteria and the like The remedies, therefore, that do the most good are those that are directed to this end, and the nearer we come to correcting the condition at the seat of action, the nervous centers, whether it be from impaired nutrition, imperfect cell proliferation, antagonism of nerve elements or forces, or retrograde metamorphosis, the nearer we will come to perfecting our therapeutics of pertussis

Those therapeutic agents recognized as anti-spasmodics are the ones mostly relied on in treatment and management of pertussis—all those medicinal agents which act primarily on the nervous system, either immediately or remotely, that deaden the sensibilities, have an inhibitory and quieting effect either locally or generally Local applications relieve, not by destroying germs, but by lessening the irritation and distress of the sensitive parts They have no continued or permanent effect upon the course of the affection, they only temporarily obtund the sensible terminal nervous filamants distributed to the immediate seat of the mucosa to which they are applied They constringe the capillaries, lessen the blood supply, quiet the irritation, diminish the tendency to paroxysmal cough to closure of the glottis, and the characteristic whoop So soon as the local effects wear off the symptoms and paroxysms are the same as before Local treatment can only have a tentative result, unless persisted in without interruption during quickly repeated intervals Only permanent benefit can proceed, and cure result from constitutional treatment

It would be useless and profit but little to enumerate all the remedies prescribed in the treatment of pertussis there are legions of them It will suffice to mention a few of the most recent and popular, or those which seem to have given the best results, namely, bromoform by inhalation, antispasmin, narcein sodium, and sodium salicylate one-sixth to one-fourth grain three or four times daily, phenyl-glycollate of antipyrin, formaldehyd, quinin in large doses, cocain in doses of one-sixth to one-third grain three times daily, and vaccination, which is said to have no effect on those who have been vaccinated Some others are still employed, as antipyrin in laurel water, belladonna atropia, potassium and sodium bromid in decided doses, assefetida, valerianate of ammonium, valerian, infusion of red clover blossom, and chestnut leaves and extract Most of these are administered internally and have a general effect Some are applied locally for immediate results It is agreed they are all of about the same nature, and we have the same object in view in their employment Those that have a constitutional bearing reach the nervous centers, and indirectly medicate locally through the blood current and the nerve supply, and by this means set up an equilibrium or healthy action throughout the system

Spraying the throat and fauces with cocain, antipyrin, potassium, bromid, carbolic acid and the like, aid materially in the treatment, but as said, have only a temporary action, and are not relied on as would be the case if the disease was simply and only of local or bacillary origin Spraying with peroxid of hydrogen, as recommended, could hardly be placed on the list of successful remedies, unless there were pus germs present Spending time in a gas house, at one time in vogue has been abandoned as not favorably affecting the disorder

The main point to have before us in the treatment of pertussis is the general health of the patient This will be most undoubtedly aided, and the cure facilitated, by the patient living as much as possible in pure, open air, by diversions of any kind, and by all means that have a tendency to elevate the standard of health

The object of this paper is more suggestive than argumentative, with no pretense to completeness, and with no effort at detail Its symptomatology, and course and deviation from a typical standard, are too well known to be rehearsed, and statistic information is too uncertain a quantity to be of any relative value

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SPINAL INJURIES IN INFANTS

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5 8 1896

BY JAMES PORTER FISKE, M D
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The subject of spinal injuries in infants is presented to you in order that a discussion by this body of these injuries will determine their relation to the faulty development of the spine in the young, and to determine the relation between trauma and spinal caries

The "traumatic spine" may be defined as any injury to the spinal column Injuries to the spine in the very young are not infrequent, though the great majority of such injuries are slight A simple sprain, muscular or bony contusion, sometimes combined with slight shock, is the usual condition following a slight fall as from a cot or sofa Again a very slight fall or sudden contact with a sharp corner of an object, may produce a true fracture of the spine, usually a fracture of a spinous process If a child falls and strikes sideways we may have a green-stick fracture of one or more ribs with twisting of the bodies of the vertebræ, presenting a clinic picture of "acute rotato-lateral curvature" or scoliosis

While many of these injuries are more or less quickly recovered from, a certain proportion will continue to give symptoms of pain, irritability and malaise A slight jar or wrench may so injure ligamentous structures that symptoms persist for a long period of time, both in adults and children, and such injuries in children may be an etiologic factor as regards the faulty development frequently seen in this region, as in curvature of the spine To the surgeon who persists in making an exact diagnosis, these cases are trying and unsatisfactory, as every injury to the spine, whether severe or slight, must of necessity be somewhat obscure The name "traumatic spine" is particularly applicable, as it is frequently impossible to classify spinal injuries as sprains, muscular contusions, rupture of ligaments or even fracture, unless the case reaches the operating table or the autopsy room

The results of an injury, mild or severe, to the spinal column can never be foretold, but to the rapidly growing infant such an injury may be most disastrous We obtain a history of traumatism in about 50 per cent of Pott's disease, and when we remember that many children apparently in perfect health are the offspring of tuberculous parents, and that such a child has an innate susceptibility for tuberculosis, or more probably has a latent tuberculosis waiting simply for a traumatism at a suitable site before firing up—these considerations should lead us to treat such cases not by observation, as is so frequently done, but by fixation and protection A previous injury is often, I believe, the predisposing factor in the production of spinal caries

Though it is not generally recognized, I believe that traumatism is an important etiologic factor in certain cases of rotato-lateral curvature, and if we could obtain a clear early history, many so-called idiopathic scolioses in children could be shown to follow the traumatic spine Unilateral muscular rigidity, an attempt by the patient to assume the position of greatest ease, a slight bending of one or more ribs, are in themselves sufficient to stimulate a faulty development of the spine in the rapidly growing infant

The examination of an infant suffering from a supposed traumatism of the spine should be as though we were trying to detect early Pott's disease The child is undressed and the posture noted, placed on the table face downward, and spine examined to detect any point of tenderness, ribs each side examined to detect any contusion or bending, feet and pelvis carefully raised to note any rigidity or diminished flexion Pain on pressure, rigidity of the spine and increased irritability of the patient, point to the diagnosis of "traumatic spine," and as such demands treatment by fixation and protection

The necessary fixation and protection in infants is most readily, efficiently and cheaply obtained by a starch-jacket It gives absolutely no discomfort, is not heavy, and it can be applied by any one in a few minutes The material used is wide [illegible] starched bandage about four inches wide of the infant is enveloped in seamless shirting from the axilla to well below the pelvis The starched bandages, after being soaked in water, should be squeezed as dry as possible and then applied The starch-jacket may be applied by the hammock method and should be in the more serious injuries, but as a rule I have extension and counter-extension made by having the child held in the horizontal position, face downward, one assistant making traction at the axilla, a second pulling the thighs at the great trochanters Every jacket should extend from the axilla down to the great trochanters After a sufficient thickness of the starch bandage has been applied, the ends of the seamless shirting are turned toward and over the jacket, thus insuring a smooth and soft border to the jacket The child is now lowered on a soft pillow and the jacket allowed to set It will take some time for the starch bandages to harden, but as a rule the child will rest quietly for a few hours The starch-jacket is quite elastic, firm and considerably tighter than plaster of paris, and is admirably adapted to the traumatic spine in infants As a matter of cleanliness, and for the proper care of the skin, the starch-jacket should be removed at the end of a week, and if indicated another applied, though I have kept one continuously applied for three weeks This jacket is not to be cut down the front, but is intended to stay on as applied

The following case is reported as it represents some of the points brought out in these notes

W , age 26 months, traumatic spine, green stick fracture of fifth and sixth ribs, near the angle, acute scoliosis, fine healthy boy, fell from nurse's arms First saw case on third day of injury Pain and swelling over and to the left of spine over fifth to seventh ribs Careful examination revealed a green stick fracture of two ribs in this region, as well as a contusion to the spine The child in assuming the position of greatest ease, showed a lateral curvature The child was held in horizontal position, considerable extension made, and a starch jacket applied Before application of the jacket the child was in constant pain and distress, after application the child was very quiet The treatment was continued for six weeks At the end of this period all symptoms had disappeared, but at the site of fracture of the ribs some thickening remained The mother wrote me some months later, stating that the child was well in every respect Sufficient extension was made in this case, so that the spine was absolutely straight before application of the jacket

I shall refrain from reporting any other cases as I expect later to exhibit some statistic tables and these notes are presented to you in this form simply as a preliminary to your discussion

In speaking of the prognosis of any injury, several factors are of importance in determining the probable outcome The condition of the child before the injury, the existence of a cachexia a possible latent strumous diathesis, the hygienic surroundings, are in themselves sufficient to turn the chances in one direction or another, whether we shall have an early recovery or a tedious and prolonged convalescence

The relation between injuries and tubercular processes in joints is of great interest Modern pathology, coupled with careful clinic observation, seems to have established pretty thoroughly that many tubercular processes have their birth in a previous traumatism, it being assumed that a tubercular taint was a concomitant condition The [illegible] between prolonged muscular spasm or irritab[illegible] ing a traumatism [illegible] elopm[illegible] ne [illegible] the rapi[illegible] h[illegible] d to [illegible] af ing rule Any injury to the spine in an infant which requires treatment, requires the starch-jacket Lotions should never be countenanced until the symptoms have subsided by the proper use of fixation and protection

ANGIO-NEUROTIC EDEMA

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

L HARRISON METTLER, A M , M D
CHICAGO ILL

Though the pathology of angio-neurotic edema is still a mere theory and its treatment a source of continual disappointment, the affection itself is of sufficient importance and its occurrence of sufficient frequency to warrant further study In the *American Journal of Medical Sciences* for December 1892, is an account of the disease, by Collins of New York, which is the most complete of the more recent descriptions Dr Collins' paper is based upon some seventy-five cases gathered from literature and personal observation, to which I can add two more, one having been under my care for about two years The history of this case is as follows

A married woman, 64 years of age, white, the mother of one child living I was consulted by her in July, 1893 Her family history revealed nothing of special note Her own general health had always been fairly good except for a certain nervousness and mental depression brought on by financial losses and worry The climacteric had come and gone without producing unusual distress She was not naturally a neurotic, though her nervous organization was an active one There were no cardiac or pulmonary manifestations The special senses were all unaffected There was no pelvic trouble, no signs of disease of any of the abdominal organs Urinary analysis revealed nothing abnormal And yet in spite of all this negative testimony, for a year or more before I saw her, she had had frequent peculiar attacks of dyspnea, "distress" in the stomach, followed by violent eructations of gas, cyanosis of the extremities, chilliness, great mental anxiety and a horrible fear of sudden dissolution These attacks would appear without the slightest premonition Day and night were alike favorable to them, though the majority of them came on toward early morning So often did they awaken her out of sleep toward daybreak that she dreaded going to bed, and tried the expedient of having her husband arouse her if he were awake at about the time they usually came on Conjointly with these spells appeared sometimes, large, circumscribed, edematous spots in various parts of the body, mostly on the arms and legs, occasionally on the face and epigastrium They resembled giant hives, itched slightly, caused no pain or other sensation than that of slight tension, were raised above the surrounding skin and were of the same color, pitted feebly upon pressure, and were devoid of all signs of an inflammatory nature Sometimes they would disappear from one part of the body to reappear a few hours later at another They have lasted at times from several hours to several days Their disappearance was generally as abrupt as their appearance Singularly enough when these edematous swellings would appear, the abdominal distress and depression of spirits seemed to be somewhat relieved, and later on the patient would walk violently up and down the floor or pass into another room with a different temperature, in the hope of provoking the swellings and thus ameliorating the nervous distress of the attack I have seen her try this several times and though I am at a loss for an explanation, I have been an eye-witness of the relief striven for When the edematous spots had finally vanished and the attack had come to an end, the patient would seem to be almost overcome with extreme exhaustion She would sigh heavily and lie for a long time perfectly motionless Even conversation seemed to be an effort and if left alone she would soon fall into a sound slumber During this period of exhaustion I could not detect any actual difference in the number or strength of respirations or heart beats The patient constantly denied all auræ such as globus hystericus, etc

For her trouble the woman had consulted a number of physicians in the United States and in Canada, had received many opinions, but had never been afforded any permanent benefit Her appetite was good, her tongue clean, her bowels regular There were no indications of gastric catarrh She was a sound sleeper and not much of a dreamer, when she did dream, however, her dreams were decidedly of the distressing, morbid sort Latterly she became very melancholy and much depressed in spirit, especially about the apparent incurability of her disease She suffered no paresthesia save the slight itching of the edematous enlargements There was no spinal tenderness no abnormality of any of the reflexes After one of her attacks there would be an abundant discharge of urine Under my direction she patiently and faithfully tried a long list of nervins, antispasmodics, general tonics, and methods of general treatment such as electricity, hydrotherapy, etc There was no permanent benefit from anything A change of environment and a short trip into the country seemed several times to keep off the attacks for awhile Of all the drugs and chemicals tried, salol and the salicylates, especially the salicylate of soda, appeared to lessen the number and shorten the duration of the attacks While taking these remedies the spells only came on in the morning and lasted but a few hours Though the most effective of all the remedies used, even these ultimately lost their power

Recognizing the hysteric semblance of the trouble I informed the husband of the same and we tried every possible means to divert the patient's mind from herself, such as forcing her into a regular occupation and congenial companionship For a time this promised a happy result, the patient being for awhile less melancholy and depressed, but ere long we were discouraged to see a return of the old attacks, especially the shortness of breath, the gastric distress and the occasional swelling about the feet, hands and chest I warned the family of the possibility of a fatal suffocation from sudden edema of the glottis By and by the attacks became so frequent that the woman refused to lie down at all at night but insisted upon sleeping in a chair At the same time the most careful examination showed no disease of the heart or of the kidneys The patella reflexes seemed to be slightly diminished She complained of much weakness, coughed a trifle without expectoration, said her throat was very dry and exhibited a flushed countenance and red tongue She revived and for several weeks seemed almost well again On Oct 12, 1894, she became much excited from some unknown cause The pulse rose to 100, the temperature remained at normal

Respirations were rapid and shallow There was loud complaining of distress or fullness in the stomach She paced the floor vigorously to bring on, as she said, "one of her old spells," as they at least gave her relief from the nervous distress At odd moments she would try to remove a ring which she supposed was on her finger or to brush invisible objects out of her lap, thus revealing slight visual hallucinations On Nov 29, 1894, I learned that the woman had been seized one night with one of her old attacks and had died of suffocation before the physician who was summoned in the neighborhood was able to do anything There was no autopsy I think the diagnosis of angio-neurotic edema was perfectly justifiable in this case

Angio-neurotic edema, first definitely described by Quincke and his pupil, Dinkelacker, is chiefly remarkable for the circumscribed swellings that appear on the face, neck and extremities, without apparent cause or previous warning For this reason it has sometimes been called *periodic swelling, urticaria tuberosa, giant swelling* There is almost always present gastro-intestinal disturbance, which is probably of an edematous nature like that of the exterior of the body The mucous membrane of the larynx may be the seat of the sudden edema and so cause an alarming dyspnea or even death by suffocation

The etiology of the disease takes cognizance of the early adult age of the patient, its more common occurrence in the male sex, the occupations which tend to excessive fatigue of mind and body, and a certain natural or acquired neurotic state of the constitution Heredity seems to play a not unimportant rôle as shown by the surprising series of cases, all in one family reported by Osler In five generations of this family twenty individuals were the victims Krieger's[1] case was a young man 25 years of age, whose mother was similarly affected Cold and traumatism are frequent exciting causes of the attacks The former in conjunction with lowered vitality, may explain to a certain extent why, as in my own case, the trouble is so prone to appear toward the early morning before the patient awakens Unusual muscular exercise will sometimes precipitate an attack I have seen a hard day's shopping, the patient passing from one store to another through the cold wintry air and climbing flights of stairs, do it

Jamieson's case, reported by Collins, affords a good picture of the symptom-group presented by my own The patient would be perfectly well apparently, and perhaps remain indoors all day Then going out into the open air toward evening, or taking a longer walk than usual, she would experience, without any premonition, a sudden attack of dyspnea, which would frighten and completely unnerve her Her extremities would become cold, the perspiration cease, a slight cough arise and a feeling come on as though the stomach were suddenly distended Generally these symptoms would be quickly followed by the characteristic edematous enlargements upon the arms and face In a few hours the attack would pass off as abruptly as it came, leaving the patient completely exhausted The disease is often associated with hysteria, if indeed it is not itself a hysteric manifestation For a long time I regarded my case as one of pure hysteria, for many of the usual stigmata were present In some cases, as in the first one reported by Collins, hysteric attacks preceded for some years the outbreaks of the edematous trouble Irregularities of the menstrual function seem to perform as much a part in the disease under consideration as they do in true hysteria Collins, Lewin and Quincke cite instances in which the onset and disappearance of the migratory edematous swellings bore a certain relationship to menstruation Amenorrhea was sometimes accompanied by a monthly swelling of the ankles, lips or eyelids

The diagnosis of angio-neurotic edema is not difficult if the characteristic symptoms are present These symptoms are especially the local swelling of the skin, the gastro-intestinal disturbance and the nervous depression The circumscribed edema of the skin is to be differentiated in this disease by the abruptness of its onset, its brief duration and its rapid disappearance Any part of the body may become its site, especially the face and extremities, and in a migratory sort of a way, it may vanish from one part to quickly reappear at another There may or may not be itching It is strictly non-inflammatory, is always more or less sharply circumscribed and sometimes is of a slightly reddish hue It does not pit upon pressure like ordinary dropsical effusion, but if firmly pressed with the tip of the finger it quickly rises to its former level As a rule, it gives rise to no annoyance, though some patients complain of a local sense of burning or scalding when it begins to appear

It is probably true that the alarming dyspnea and associated gastro-intestinal trouble are the result of the same edematous process going on within the mucous membrane Krieger's case, a typical one, was found dead in bed one morning and an autopsy showed that death was caused by sudden edema of the glottis Collins finds that out of seventy-two cases three showed their initial symptoms to be located in the stomach and in 34 per cent of them all, gastro-intestinal manifestations were of sufficient importance to attract notice The throat was involved in about 21 per cent of all cases, a fact which should be carefully remarked as death has more than once resulted from edema of the larynx The stomach symptoms are generally a sense of uneasiness and extreme tension, loss of appetite, enlargement of the epigastrium, colic, and sometimes profuse vomiting and intolerable thirst Osler says the pains may become so severe at times as to require the administration of morphia In my case there was at no time any marked pain, but an intolerable sense of fullness and of retained undigested matter, and a bloated appearance of the epigastrium The patient was generally constipated A colliquative diarrhea sometimes follows the disappearance of an attack The urine is often voided in large amount, but frequent examination of it reveals nothing out of the ordinary Complete exhaustion and nervous anxiety often terminate an attack It was with great difficulty that my patient could be persuaded that her heart action was normal, so weak and prostrated did she feel when recovering Between the attacks the general health is good

Angio-neurotic edema is probably related to hysteria but the suddenness with which it comes and goes, the absence of the usual, well-known stigmata of the latter and other symptoms, all tend to prove that it is not hysteria itself It is a functional trouble of the sympathetic and central nervous systems, but the cause and character of this trouble are, up to the present time, entirely unknown Plausible theories and shrewd guesses have been made but nothing of a positive nature has yet been actually discovered The disease is rarely fatal and autopsies have been exceedingly rare It is most decidedly a chronic affection, lasting now and then a whole lifetime It is happily only fatal in those rare cases where the edematous process attacks the mucous membrane of the larynx

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[1] Meditzinskie Obozrenie, 1889 Sajous Annual

No remedy has yet been suggested for its relief Neither the disease itself nor the attacks are amenable to any known treatment The salicylates, especially the salicylate of soda, have given the best results in the hands of others as well as in my own By them the intervals between the attacks appeared to be lengthened, but as for lessening the severity of the attacks or in any way actually producing anything like a permanent cure I could not see that this or any other of the long list of remedies which I experimented with, was of the least avail Angio-neurotic edema is a unique affection which needs a great deal more study for its complete elucidation

4544 Lake Avenue

INTRALIGAMENTOUS FIBROMYOMA COMPLICATING PREGNANCY AT FULL TERM, HYSTEROMYOMECTOMY, RECOVERY

BY RICHARD DOUGLAS, M D

NASHVILLE TENN

As the records do not abound with cases of complete hysterectomy for fibroid complicating pregnancy, I presume a detailed report of the following case will bear some interest

Mrs N, 33 years of age, a multipara, her youngest child was born five years ago All labors normal with uncomplicated convalescence During the year 1894 there had been some menstrual disorder, irregularity and at times profuse flow In May, 1895, she consulted Dr J W McCall for her uterine trouble, the result of the examination I report in his words "I made a digital and specular examination, was unable to find the os uteri The right vaginal vault and iliac region were filled with a hard tumor " The case passed from under Dr McCall s observation and was not seen by him again until March 8, 1896, when he was called in consultation with Dr Howard The patient had then been in labor sixty hours, supposed to be at full term Her physicians recognized that the pelvis was encroached upon by a hard tumor This tumor seemed to lie entirely in front of the os uteri, completely blocking the natural channel Recognizing the impossibility of delivering the child *per vias naturales*, I was telegraphed for, and with my assistant, Dr Barr, and nurse reached the patient about two o'clock on the morning of March 9, seventy-two hours after the onset of labor

That my readers may have some appreciation of the difficulties encountered in a country practice, I will say that my patient lived in a little box cabin about 12 x 20 feet, divided by a rude partition into two small rooms provided with none of the comforts and scarcely the necessities of life Amid these surroundings her noble self-sacrificing physicians had been in constant attendance, doing all in their power for the relief of the suffering woman, with no thought of pecuniary reward and with little hope of being able to save the patient.

Labor had been most violent and exhausting, but for the last twelve hours uterine contractions had almost ceased

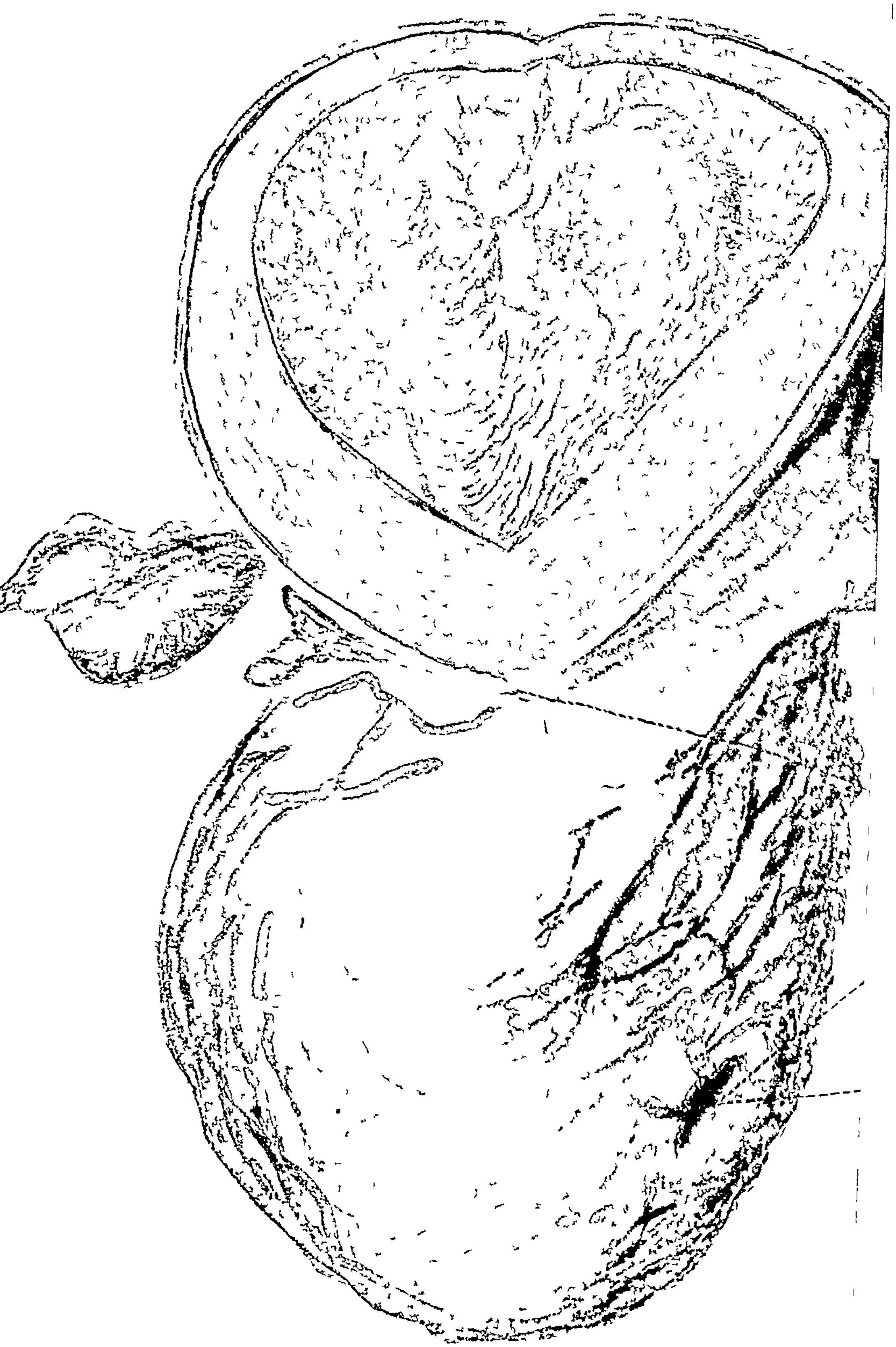
Notwithstanding the protracted labor the patient appeared in very good general condition Her pulse was regular and about 120, temperature 101 degrees patient remarkably quiet and composed Physical examination of the abdomen revealed rather an unusual morphology The abdomen was asymmetrically distended, unusually broad in its transverse diameter, widely bulging in the flanks, somewhat flat or depressed in the middle line The greatest enlargement appeared on the left side and above the umbilicus On palpation a round and very hard swelling about the size of an adult head could be detected in the right side The center portion of the abdomen was soft, elastic and compressible In the left side we could easily determine by manipulation a vertex presentation, the head resting in the left iliac fossa, occiput to the left, dorsum of child to mother's left side, a first position if in axis of pelvis There was no uterine contraction in response to our manipulation Fetal heart sounds could not be detected upon auscultation, the patient had not felt fetal movements for twelve hours

Vaginal examination revealed a capacious vagina, the entire pelvis was filled by a smooth, hard, inelastic tumor which was firmly fixed in the pelvis Every effort to raise it upward was ineffectual The os uteri was reached with the greatest difficulty, it lay very high up out of the true pelvis and to the extreme left side, could not reach the os sufficiently well to pass the finger beyond the margin of the right border of the cervix

Diagnosis—*Uterine fibromyoma springing from* the supravaginal cervix and the right side of the body of the womb firmly wedged in the pelvis, filling that cavity, displacing the uterus and occupying the hypogastric right inguinal and lumbar regions of the abdomen, pregnancy at full term, amniotic fluid escaped and the child in all probability dead Complete uterine inertia from exhaustion and inefficient contraction due to presence of the growth

After consultation with my associates it was determined that an operation was immediately demanded and that that operation should be in all probability a complete hysterectomy We discussed the propriety of Cæsarean section, but the idea of leaving so large a tumor with the dangers incident to the operation and puerperal state, were against such an incomplete procedure Furthermore, knowing the uterus to be in a state of inertia, hemorrhage after Cæsarean section appeared to our minds a danger of great moment Therefore determining upon hysterectomy as the only means of saving our patient's life, and gaining her consent to anything that we might deem best, we prepared with such poor accommodations as the place afforded for the undertaking

Preparation—An ordinary kitchen bench with the filth of ages upon it, covered however by a clean sheet, was the improvised operating table The bed served as a table for my instrument trays, one bowl and pitcher for sponge basins, and two dimly burning lamps gave us all the light we had Fortunately, my instruments, ligatures, sponges and towels had all been thoroughly sterilized and we managed to protect them from contamination Boiled water in abundance was supplied Notwithstanding the urgency of the case, much time was spent in careful aseptic pre-



Fibro-myoma complicating Pregnancy at Full Term Dr Richard

A, Cervical canal, 4 inches long B, Os uteri Reduced one third

paration of the patient, and after asepticizing ourselves as thoroughly as conditions would admit, the patient was anesthetized with ether by Dr J H McCall

Operation—The abdomen was opened by free incision from well above the umbilicus to the pubes The distended uterus was raised up and as well as its tumor would permit, out of the abdomen A hot towel was placed over the intestines and four provisional sutures were placed in the upper portion of the wound, crossed and given a half turn so as to draw the wound together and still further protect the intestines The uterus was observed to be somewhat rotated upon its axis, that is the right border presented to the center A large rubber dam was now placed around the uterus and made to hug it very closely and fixed with a safety pin to protect the cavity from blood or escaping fluid From the location of the tumor it was impossible for us to encircle the uterus with a tourniquet Therefore my first assistant, Dr Barr, grasped the cervix as low down as he could with both hands making firm pressure so as to control hemorrhage The uterus was opened as in Cesarean section, the child was seized by its breech and removed It was observed to gasp once Waiting a few moments the cord was severed between catch forceps and the child intrusted to a physician who made unsuccessful efforts to resuscitate it The uterus remained perfectly flabby, no contraction whatsoever and yet the hemorrhage was not very profuse, a few hot sponges placed in the line of the wound controlled it As we comtemplated removing the uterus the placenta was not disturbed The assistant still holding the uterus to control bleeding, I now proceeded with the hysterectomy The tumor was found to be an intraligamentous fibroid and it lifted the peritoneum entirely from the floor of the pelvis Ligating the right infundibulo-pelvic ligament, catching the tube and ovary with pressure forceps, I cut between With separate ligature the right round ligament was secured The Fallopian tube and round ligament were at least four inches apart, that is, the broad ligament was expanded to this extent by the tumor I next split open the broad ligament on the top of the tumor by an incision parallel to the tube and without difficulty peeled down the peritoneum before and behind and enucleated the tumor, which involved the right side of the body of the cervix of the uterus Lifting the tumor up I felt distinctly pulsating the uterine artery just as it ascended to the cervix Isolating it fairly well its deligation was securely effected Up to this point in the operation I had not come in contact with the bladder With the tumor now enucleated, attached only to the uterus and all vessels upon that side secured, I proceeded in the usual way with the left side Here I encountered the greatest difficulty After ligating the ovarian vessels the tissues were so hypertrophied, the veins so enormously distended and everything distorted, I was not quite sure of my anatomy, but dissecting the bladder from the anterior surface of the uterus and carefully avoiding the ureter I finally succeeded in ligating *en masse* a lump of parametric tissue in which was concealed the uterine artery I now separated the uterus from its vaginal attachments and quickly removed the entire organ with its attached tumor and contained placenta The bleeding was very profuse from numerous points, particularly from the anterior vaginal artery, and all of these were grasped with forceps and then securely ligated All these ligatures and those upon the uterine artery were left long and pushed into the vagina, the others were cut short The open broad ligaments were closed with silk sutures, the pelvis thoroughly cleansed and packed with gauze, the free end of which was carried into the vagina The abdominal wound was closed in the usual way The shock from the operation was comparatively slight considering the time one hour and fifteen minutes and the many difficulties we had to contend with The patient had reacted thoroughly in two hours after the operation and expressed herself as comfortable and determined to get well There is little to relate of the after-treatment of the case Thanks to the assiduous attention of her physicians, Drs Howard, McCall and Cox, and her excellent constitution, she made a quick recovery and is now a perfectly well woman

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CATARRHAL DISEASES OF THE NOSE AND THROAT

BY J D ALBRIGHT, M D

AKRON, PA

To any careful observer, and all physicians should be such, it must have become apparent that catarrhal diseases of the nose and throat are becoming more and more frequent and play a most important part in the practice of every physician who gives more than passing attention to their treatment

There seems to be a prevailing opinion in the minds of many of our profession that the correct treatment of these diseases involve the use of special and expensive instruments and require a more than ordinary degree of skill to use them properly, so that these cases are allowed to drift to the specialist, who, by the way, is often no more than a physician who keeps posted and has the courage to apply his knowledge

By a moderate amount of study and diligent practice, by perseverance in the use of the methods at hand the general practitioner may overcome imaginary difficulties that seem to stand between him and success and he will be richly rewarded for his time and labor so spent The instruments that may be called necessary are A good light, a head mirror, a nasal speculum, a tongue depressor and a laryngeal mirror With these as aids in diagnosis, if the examination is conducted carefully, we are certainly in a position to diagnosticate the existing conditions and therefore treat them intelligently Among the laity there is much termed "catarrh" that bears no relation whatever to it, and in this disease more than in any other these people glory in making their own diagnosis, so that the physician is often taken off his guard and is led to treat catarrh on the strength of his patient's words instead of a careful examination We have different forms of this trouble 1, simple chronic rhinitis 2, hypertrophic rhinitis, and 3, atrophic rhinitis

Simple chronic rhinitis —This is a simple inflammation of the mucous membrane of the nasal cavity, without any structural changes Its only symptom is a discharge of mucus or sometimes, when of long standing, muco-pus On examination you will find a congested membrane, with here and there yellowish or whitish spots of mucus In the vault of the pharynx where there is much glandular tissue there will be a swelling, giving them a turgid appearance, and the secretion which covers them **will be** found to be more tenacious When these ca[illegible] a [illegible] he can with a certainty pred[illegible] only in the first stage, simple rhinitis, although of perhaps quite a long standing, getting no worse nor yet any better The treatment for this condition is as follows Cleanse the mucous membrane thoroughly with warm water, applied by means of a douche, such as the Bermingham, after which by means of the same douche or an atomizer, make an application of the following Glyco-thymolin (Kress) one part, water distilled, three to six parts This mixture should be used twice daily It will be found best to use six parts of water for a beginning and gradually strengthen until only three parts are used As before stated, there will very seldom be more than this treatment required in this form of nasal catarrh, as they at once proceed to recovery

Hypertrophic rhinitis —A certain number of cases suffering with simple rhinitis will neglect taking treatment until they have developed our second class, chronic hypertrophic rhinitis, and will then consult the physician Here, on examination, a different aspect presents itself, as we have first, marked structural changes, a proliferation of all the normal mucous membrane, making it of increased size, therefore called hypertrophic, enlarged The glands in the vault of the pharynx are also enlarged, subject to the same influence as the membrane of the nose The secretions are now thick and tenacious, which with the enlarged membrane occludes the air passages, causing difficult breathing, causing the voice to be nasal in character and causing the patient to become concerned about himself, perhaps for the first time In the treatment of this condition, all that I have said on the previous stage applies to this one, with more added Do not forget to cleanse the passages, this is the fundamental principle of successful treatment, and as such a saline solution, such as glyco thymolin (Kress), is practically the best remedy for the purpose It cleanses and it heals, it causes a proper degree of healthy stimulation, it acts as an antiseptic and is a most efficient deodorizer As the comfort of the patient is a desideratum, the use of a 5 per cent solution of cocain applied to the turgescent membrane is often advisable, covering the membrane which covers the inferior turbinated bones, in order to allow more freedom in breathing This may be done once or twice daily by the patient, at different times as occasion demands The action of cocain on these tissues is well known The cleansing solution and the cocain applications the patient can well himself apply, but the following application should be made in the office of the physician, as it can be more thoroughly accomplished, and I am of the opinion that the mind influence over the patient is better when he must daily visit the physician, it reminds him that he is under treatment and thus prevents his neglecting the home treatment For the following remedy a good atomizer should be used, with a nasal tube, and a long tube for the pharynx, and an application should be made once daily, while necessary This will cure Iodin 3 grs, potass iodid 10 grs, zinc sulpho-carb 15 grs, glyco-thymolin (Kress) 1 oz, aqua q s, ad 4 ozs Mix Sig Use as above stated This treatment kept up for a month, or perhaps longer if a serious case, will do its work well

Atrophic rhinitis —This form is caused at times by neglecting the disease when in the hypertrophic stage, and is essentially a death of the tissues The tissues were crowded to death by the enlargement Here there is plenty of room in the nasal cavity, there is no interference with the voice or breathing, the secretions are hard and in the form of crusts, the posterior wall of the pharynx will be seen to be dry and shiny, the sense of smell is interfered with, sometimes destroyed, there is at times pain in the frontal sinuses, or in other parts of the head, the patient is irritable and very sensitive to atmospheric changes

These cases are very often afflicted with a fearful odor, very often on this account do they consult you Our words of encouragement to the patients suffering with the two varieties preceding must now cease, for unfortunately the cure of atrophic rhinitis is in most cases beyond us, be careful then what you promise your patient Promise nothing but relief, and if occasionally one case or another leaves you satisfied that you have cured him, restored his sense of smell or hearing do not become elated, for if you thus set up your standard you will very often meet with bitter disappointment

The indications we wish to meet in these cases to afford our patients relief are two-fold, cleansing and disinfecting and I may add keeping them thus and attempting to regenerate the atrophied membrane, which as before said can be but very seldom hoped for The first indication of cleansing and disinfecting is met by daily washings with the solution before given of water and glyco-thymolin, three of the former to one of the latter, so as to remove all offending secretions Occasionally these crusts must be removed by means of a forceps, which if necessary must not be neglected A spray of liquid vaselin to which a little camphor has been added, after these washings, will be agreeable to the patient, as it will prevent the annoying dryness of the air passages, and I doubt not but that it is of some remedial value

For the purpose of stimulating and regenerating the atrophied mucous membrane there are recommended, salicylic acid galangal root, nitrate of silver, etc, blown into the nose by an insufflator, but I can not but repeat myself and say that this will very seldom be accomplished, and he who is careful will never promise nor yet expect it Regarding the internal treatment of catarrh, I have never seen any good result from its use and I think the consensus of opinion of the entire profession, the regular, hold that it is a local disease and as such requires only local treatment Constitutional defects must be recognized and treated, but the remedies employed have no effect on the catarrh, *per se*

THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration held at Atlanta, Ga, May 1896

BY EUGENE FOSTER, M D

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE AND STATE MEDICINE AND DEAN OF THE FACULTY OF THE MEDICAL DEPARTMENT UNIVERSITY OF GEORGIA AUGUSTA GA

(*Continued from page 862*)

PROPOSITION 10

If the operation of vaccination be done with due regard to the rules of modern aseptic surgery, with due regard to the health of the individual vaccinated, and proper precautions be observed in obtaining and using vaccine lymph, there need be no apprehension that vaccination will injure health or communicate any disease other than vaccinia

Antivaccinists seriously contend that "Vaccination propagates syphilis, consumption and hereditary diseases, which appear years afterward at their appointed time It produces immediately erysipelas, and aggravates the disorders of childhood, destroying the germs of the teeth during teething It is especially productive of mesenteric and glandular diseases, and lies at the foundation of the shameful mortality of whooping cough "

Mr P A Siljestrom (who the *Vaccination Enquirer*, the journal of the antivaccinists, says is "one who has mastered the vaccination question") states, "It has been proved that disease (especially erysipelas and syphilis) and death have not infrequently been observed to result from vaccination "

Mr P A Taylor, M P , of England (another leader of the antivaccinists) says, " Not tens but hundreds of thousands of persons in this country (England) have mourned the death or ruined health of their children through the results of vaccination "

The above are fair samples of objections raised against vaccination by antivaccinists, and if it can be shown that either or all of the above assertions be true, then the medical profession of the civilized world has for the past century been most grossly careless and ignorant in accepting and recommending vaccination as a prophylactic against smallpox

Let us, then, once again carefully examine these objections, and decide if or not they be well founded

As preliminary to a full consideration of these points I submit, and endorse, the following from John Simon of England, one of the ablest, most renowned and conscientious sanitarians and medical philosophers of this century—a man who has more exhaustively, ably and impartially investigated the vaccination question than any other physician living or dead Simon says

" Is properly performed vaccination, then, an absolutely inoffensive proceeding? Not at all, nor does it pretend to be so The very meaning of the thing is, that it shall artificially and designedly produce a transient and trifling indisposition , that for some days the infant shall be uncomfortable with a sore arm and a slight irritation of the adjacent axillary glands, and a perceptible amount of general feverishness Within the limits of this description, one child may be a little more, another a little less, inconvenienced , but those limits are rarely exceeded And if it can not strictly be said that the immediate effects of well performed vaccination never exceed the intentions of the vaccinator, at least it may be affirmed that any permanent injury resulting from it is an accident barely known in the practice of surgery

" Persons hostile to vaccination allege against it, that it produces eruptions on the skin and glandular swellings, and others, not unfavorable to the practice, doubt whether this to some extent may not (and especially as regards unhealthy predisposed scrofulous children) be a true allegation

" Vaccination might afford to bear these imputations For, to what do they amount? Were they ever so true, the alleged evil, even to the sufferer, would be little in comparison with his gain , and the total amount of such evils, compared to the social advantages of vaccination, would, literally speaking, be too small to appreciate

" But in fact, the imputation is—at least generally—erroneous There is in it again that common fallacy of calling whatever happens after an event its effect Propter, quia post The infant is commonly vaccinated at three or four months of age Thus whatever physical or moral evils belong to human life are very likely to have been preceded by vaccination , and it is not extraordinary that, especially by ignorant persons, this operation should often be charged with producing incredible results When you consider, too, that the few months after vaccination include events which are very critical to infant life, you will see what frequent room there must be for misconception Even to the healthiest and best cared for of children, weaning and teething are not perfectly safe and comfortable processes , to delicate and ill nurtured children they are often fatal , to vast numbers they occasion, sometimes during many months distressing or alarming symptoms Such symptoms I need hardly tell you, affect both vaccinated and unvaccinated They have been known as incidental to infancy from periods long anterior to Jenner's existence Now, an extremely frequent one of such symptoms is an inflammation of skin (known by the technical name of eczema infantile) producing on the child's face and head, or on other, perhaps many or most parts of the body a dense eruption of little pimples, which presently convert into an itching and discharging surface so much of the skin as they occupy , and since irritations of the skin are peculiarly apt to propagate themselves in the direction of the return current of the circulation of the blood to certian organs, the so called lymphatic or absorbent glands which are subsidiary to this circulation, so it very commonly happens that more or less irritation and swelling of these glands will accompany that eczematous eruption , and that, for instance, the child who has the eruption about its head and face (which are among the most usual seats of the unsightly disease) will often be still further disfigured by glandular swellings in the neck Though I have spoken of this infantile complaint as incident to the time of teething and weaning, yet in fact it may arise at earlier periods of life, even within a few weeks of birth, and, of course, before vaccination as well as after it Indeed, frequently it is a reason for which vaccination is postponed , and perhaps I give you no readier means of estimating how little vaccination has to do with its occurrence, than by telling you, first, that before the discovery of vaccination smallpox inoculation was charged with producing it and, secondly, that in 1714, when smallpox inoculation was yet unknown in England, Dr Daniel Turner expressed himself in the following terms 'Among diseases of infants and young children scarce any attends more frequently that pustulary or scabby eruptions in several parts of their bodies, as in the breech, but more especially their foreheads, brows and other parts of the face, which we find oftentimes overrun with dry and crusty scabs '

"The circumstances under which both infantile eczema and glandular swellings arise are familiarly known to the medical profession To say that properly performed vaccination can have directly to do with them, that it can directly cause general eczema, or directly affect any glands but those which it is intended and expected to affect would be an assertion not warranted either by practical experience or by any pathologic probability To say that indirectly it may do so, that in the very few instances where it produces excessive results, the disturbance that, under such very exceptional circumstances, it may for the time of its operation predispose the child to this complaint and to that, may excite the scrofulous child to show its scrofula, and the eczematous child to show eczema, these are assertions which may or may not be true , which are more easily made than either established or refuted , but which, if admitted in their utmost scope, really allege against a cold in the head, a cut finger, an undigested meal, or any other one of the thousand minor accidents of everyday life

' So much for what has been alleged against properly performed vaccination, against such vaccination as alone ought to prevail in any country where the State requires its performance So much for the drawbacks which have falsely been said to detract from its inestimable advantages, and the dangers which, with almost equal fasehood, have been said to attend its performance

" It is less easy and less necessary to dispose of what may be said against ill performed vaccination , understanding in this phrase not merely such vaccination as is done with an unskilful hand, for commonly the worst effects of clumsiness is only that the operation fails , but especially referring to such vaccinnation as is done without due inquiry into the health of the child to be vaccinated, or without due care for the quality of the lymph to be employed

" If local scandals have arisen against vaccination, and if some prejudices against it seem to have in them a show of reason, those are the sources from which such serious evils have come All that belongs to the mere manual trick of vaccination is learnt from a minute's teaching and an hour's practice , but not so easily the philosophy of the procedure, or the precautions which are requisite to make it harmless and useful From Jenner onward, all great masters of vaccination have urged that its merits will always appear proportionate to the merits of the performers , that if sickly children are vaccinated without due regard to their actual condition of health, children teething, and the like , or if children, healthy or unhealthy, are vaccinated with improper material, the results must be at least unsatisfactory, and possibly dangerous And all competent persons accordingly recognize that one who would vaccinate must thoroughly study these things

' Especially as regards the quality of vaccine lymph, the careless or uneducated vaccinator is using a dangerous weapon It is only during part of the course of a vaccine vesicle that its lymph is suitable for further vaccinations , for after a given moment, at which the contents of the vesicle possess their maximum of simple contagiousness they tend more and more toward the quality of common inflammatory products and matter now taken from the vesicle is no longer the simple agent of a specific infection, but both has less efficiency for its real purpose, and is specially able to produce other undesired results A danger of somewhat similar kind is that of taking lymph from vesicles which already have been accidentally ruptured, or where from any other cause, local or constitutional, their specific fluid is likely to have been modified by common irritative processes Still more critical changes occur in lymph when removed from the body, unless appropriate means be taken to preserve it , for u [illegible] ce of [illegible] and moisture it tends, like other d [illegible] out decomposition and inoculation w [illegible] can hardly be more useful or less dangerous than a casual scratch inflicted in the dissecting room According to the usual practice of vaccination, error is less likely to be committed in this particular than in the one first mentioned, for, when the operation is not performed from arm to arm, use is very generally made of lancets or ivory points on which lymph has been allowed to dry Under this system (at least in our climate) the matter is almost secure from change, and there is little room for such accidents as might arise from failure in those delicate procedures by which lymph is sometimes kept moist for use But the danger of taking matter from irritated vesicles, and and from vesicles at too advanced a period in their course, is one which circumstances render frequent, and there is reason to believe that in at least a very large proportion of those cases where abnormal effects have resulted from so called vaccination, it has been the employment of this ambiguous irritative matter which has occasioned the mischief and scandal

"Suspicions are sometimes expressed that a slovenly vaccinator, careless in his choice of lymph, may thus cammunicate to one child the constitutional or local disease of another If this be true it were nothing against vaccination It is no argument against bread that alum constipates the bowels, still less is it an argument against quinin that some drunken shop boy may give one strychnin instead of it And, without intending disrespect to gentlemen whose opinions on this point may be less decided than my own, I must say that I believe it to be utterly impossible, except under circumstances of gross and punishable misconduct, for any other infection than that of cowpox to be communicated in what pretends to be the performance of vaccination A vaccinator must forget his duty in more than one particular, he must be indifferent both to the feelings of others and to the social progress of the great good which he claims to administer, if he affronts the natural antipathies of those who bring their children to be vaccinated by drawing the lymph for vaccination from the vesicles of diseased subjects And, practically speaking, I can conceive of no circumstances in this country which justify a departure from the rule (recognized by the medical profession as unreservedly as it is desired by the public) that lymph be taken only from healthy subjects

"But, supposing that, in breach of this rule, lymph be taken from Jennerian vesicles on the arm of a subject suffering constitutional disease, what then? On the assumption only that it be a true Jennerian vesicle at the proper period of its development, there are cogent reasons for believing that such vaccination can produce none but normal results

"There is one simple mass of experience, which, to my mind, seems conclusive It has been proved on a large scale that vaccin lymph, taken from persons actually suffering from smallpox, conveys to those who are vaccinated with it no other than the vaccin infection This most remarkable truth has been established, I say, on a large scale, for, not once or twice, but at least hundreds of times, something to the following effect has occurred A patient has been vaccinated a little too late for protection Warned of his danger he has had recourse to vaccination when already smallpox was in his system, and (under a law which expresses the intimate affinity of these two agents) the operation of the inhaled variolous contagion, and the opperation of the inoculated vaccin contagion, have proceeded simultaneously on his person, the former producing the general eruption of smallpox, the latter producing at the vaccination spots characteristic Jennerian vesicles And with the lymph of these vesicles, again and again, successful vaccination has been performed Again and again it has been shown that such lymph is capable only of communicating the Jennerian infection

"Since then it is a quite unquestionable certainty that, even the system is drenched with that subtlest infection of smallpox the Jennerian vesicle preserves its own contagion pure and isolated, the argument may reasonably be extended And, even if there were no evidence in relation to other diseases, this analogy would have rendered it eminently improbable that any, the most infectious, of their number could admix its contagion with the specific products of cowpox Indeed, so definitely and so constantly characterized are those local changes which different morbid poisons severally and specifically produce, that to say of a given phenomenon 'this is a typical Jennerian vesicle' is, I believe, tantamount to saying this is a vesicle, which only one modified influence can produce, which no second influence can concur in producing, and in the contagion of which no second principle of infection can possibly reside

"Turning, however, from these general considerations, I may inform you that the diseases which it has been suspected that vaccination might communicate have chiefly been scrofulous and syphilitic complaints, and various eruptions of the skin In all but a very limited number of these cases it may be conclusively answered that the suspected mischief is physically impossible Scrofula, for instance, and most skin diseases, even when for experiment their specific discharges and other products are deliberately inoculated on the healthy, are absolutely incommunicable by contagion, and it is inconceivable that the vaccin lymph, even if it could include these products, would alter the essential condition of their nature Of some others among the diseases referred to, it may no doubt be admitted that certain of their products are infectious, but then again comes the question (which is already by anticipation almost disposed of) whether the constitutional existence of such diseases can qualify the contents without modifying the characteristic development of a true Jennerian vesicle

"Experiment, where it has been deliberately addressed to the solution of this question, has invariably answered, no, and such experiment is worth many arguments "

After quoting from M Taupin, Simon says

"I am not aware of any counter experiments suggesting different conclusions to those which are expressed and justified in the preceding passage They assert for vaccin lymph the principle which Dr Mead a century ago asserted for the virus of smallpox inoculation It is more material into what kind of body it be infused than out of what it be taken Indeed, in the whole list of diseases syphilis is the only one to which serious suspicion will attach, and, in regard to its communicability by the lymph of a true Jennerian vesicle, various other observers confirm the accuracy of M Taupin's result

"Moreover, Professor Sigmund of Vienna (whose researches on everything relating to the inoculation of syphilis have been on a very large scale) has added to M Taupin's results, one which quite in a different manner, is equally against the possible invaccination of syphilis In an official report on the division of the hospital over which he presides (Aertzlicher Bericht des Allgem Krankenhauses, Wien, 1855) he relates experiments to show that syphilis in its inoculable form prevents, within the sphere of its infection the simultaneous formation of a vaccin vesicle The discharge of chancre (in which form alone syphilis is universally recognized to be inocuable) has been designedly mixed, as by nature it never could be mixed, with ordinary vaccin lymph, and insertion of this compound poison in the skin has been followed only by the ordinary local results of syphilitic infection No Jennerian vesicle had been formed No signs have existed of any possible combination of the two infections Dr Friedinger, who conducted these important experiments in Professor Sigmund's wards and under his observation, has also communicated their result to the society of surgeons at Vienna

"It is unquestionable, however, that cases are recorded in which the lookers on (sometimes including a medical practitioner) have believed syphilis to have been communicated by vaccination A moment's reflection suggests that in such cases there must generally be sources of fallacy, which render them, in contrast with experimental results, almost valueless for instruction When a child is born with a heritage of syphilis (a very frequent incident, if the parents have been suffering from that disease) the characteristic symptoms commonly do not appear till some weeks after birth And then the scandal discloses itself Now, among persons with any sense of shame, the knowledge that one had transmitted syphilis to one's child would always be a sore subject There would be strong temptations to employ false pretense Not only would parents often conjointly wish to disguise from their medical attendant or from members of their household, the real explanation of the child's ailment, but also, not unfrequently, one parent would wish to conceal from the other that the origin of the disease had been a conjugal infidelity In respect even of unmarried people, every surgeon knows what utterly false, far fetched and absurd explanations are given of syphilitic symptoms primary and secondary, and it requires little experience to imagine how much more pertinacious will be the demand for excuses, and how much more active the supply of falsehood, under the complicated circumstances of connubial syphilis Accordingly it is a matter of surprise that vaccination has not almost generally been pitched upon by persons in search of an apology for their syphilitic children But in truth even such allegations against it have been few and their paucity (assuming them all to have been made in good faith) would be a strong reason for regarding them with mistrust, for surely if syphilis could be diffused by the vaccin lymph of children with an hereditary taint of that disease, this possibility must long ago have been made evident on a scale far too considerable for question

"Among the scanty number of recorded cases in which such allegations have been made, there are, however, some in which, so far as I can judge, it seems almost certain that a person pretending to vaccinate did really effect a syphilitic inoculation Properly to estimate these grevious instances of mal practice, two considerations must be adverted to 1 To the already quoted negative results obtained by Taupin and many other observers in their experimental inoculations of lymph from the true Jennerian vesicle of syphilitic children 2 To the fact that secondary syphilis itself is very possibly not communicable even by direct inoculation of matter from the ulcer and eruptions which it occasions, for many of the ablest experimenters in Europe declare that in hundreds of trials they have never once succeeded in thus conveying from person to person the slightest infection of syphilis And, regard being had to these considerations, it becomes almost certain that in the cases referred to the matter of chancres, the matter of primary syphilis was used instead of vaccin lymph by the vaccinator, a mistake (however it may have occurred) of so gross and criminal a nature that the medical profession would feel no sympathy for the person through whose neglect or incompetence it happened

"But in coming to cases of this description there is no longer question of the merit of vaccination If recorded instances of the kind, instead of being so few that you count them on your fingers, were of innumerable frequency, they would make no argument against vaccination Only they would if possible, render more obvious than it is the expediency and duty of providing that this great self defense of nations against pestilence be not ignorantly and recklessly administered

"Here, indeed, is the whole gist of the matter Earlier parts of this letter have shown that by vaccination, properly administered, the once enormous fatality of smallpox may be reduced to nothing The present section justifies a conclusion that against this vast gain there is no loss account Of the various alleged drawbacks to such great advantages the present state of medical knowledge recognizes no single trace Jenner's discovery, properly utilized, has been a pure blessing to mankind, an unmixed addition to the strength and happiness of nations

"To say of vaccination that it has sometimes been ill administered, to say that under the pretext of its administration harm has sometimes been given instead of good, poison instead of antidote, is to speak, not against it, but, whether rightly or wrongly, against its administrators The vaccinations of Europe are now counted annually by millions It may be vain to hope that every lancet shall be used with equal skill and equal carefulness, or that all populations shall be equally anxious to render the operations successful, but Medicine at least has contributed her share in showing that, subject to these conditions, smallpox need cause no further fear nor its antidote be accepted with mistrust"

So much for the general principles controling the question of objections to vaccination presented by John Simon

(*To be continued*)

Report of the Surgeon-General of the Army for the Year Ending June 30, 1896

The following is an abstract of Surgeon General Sternberg's report, omitting financial statements, special reports of medical officers, statistic tables and other matters of detail

War Department, Surgeon General's Office,
Washington, D C Sept 8, 1896

Sir I have the honor to submit the following report of my administration of the duties of this office during the past year Beside the health of the troops and the sanitary condition of the various military posts, this report relates to certain duties imposed upon the Surgeon General of the Army by the Revised Statutes of the United States and by Acts of Congress making appropriations to be disbursed under his direction

Among the expenditures authorized by Congress for the year ended June 30, 1896, were those for artificial limbs and their commutation, for appliances for disabled soldiers, for trusses, for the support and treatment of destitute patients in the city of Washington, D C, for the Army and Navy General Hospital, Hot Springs, Ark, for the Army Medical Museum and Library of the Surgeon General's Office, for the construction and repair of hospitals, and for medical and hospital supplies for the use of the Army

Artificial limbs and their commutation —During the fiscal year ended June 30, 1896, 21 artificial legs were furnished and commutation was paid in 101 cases of amputated leg, in 69 of amputated arm, and 13 of amputated foot Commutation was paid also in 2,402 cases in which the use of a limb was lost

It is believed that the appropriation of $575,000 for the year ending June 30, 1897 will suffice to cover the benefits accruing to the pensioners during the current year

The amount required for the year ending June 30, 1898, will amount to about $183,000 This estimate is based on the fact that of the appropriation of $194,000 for the fiscal year 1895, $184,192 55 was disbursed during that year, and $7,610 74 during the year 1896, making a total of $191 803 29 disbursed from the appropriation As these benefits recur every three years, an appropriation will be required for the year ending June 30, 1898, approaching in amount to the sum expended from the appropriation for the year ended June 30, 1895 The actual amount that will be required will depend on the number of those paid in 1895 who are found to have survived the interval of three years As well as can be learned from the statistics, the death rate is about 1 6 per cent annually, or 4 8 per cent for the three years The estimate for the fiscal year would, therefore, be the amount paid in 1895 lessened by 4 8 per cent, or $183,000

Appliances —The number of appliances issued to disabled soldiers during the year was 162, for which was disbursed a total of $1,245 22

Trusses —There was expended in furnishing and fitting trusses to disabled soldiers under Sections 1,176 to 1,178, Revised Statutes of the United States, and the Act of March 3, 1879, the sum of $7,699 70 The number of trusses issued and fitted during the year was 1,106

Providence Hospital —The Act of Congress approved March 2, 1895, appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D C The amount of relief afforded under this appropriation was equivalent to the treatment of 114 patients throughout the year

Army and Navy General Hospital, Hot Springs, Ark —Twenty five officers and eighty five enlisted men were treated during the year The special advantages afforded by the Government in this General Hospital in the treatment of the diseases mentioned in Circular No 16, A G O, Dec 8, 1892, do not seem to be appreciated properly by medical officers of the Army It is equipped with all the latest and best appliances for the treatment of patients by hydrotherapy, electricity, massage and Swedish movements No sanitarium or private establishment at Hot Springs offers any such advantages It is believed that if cases suitable for treatment at the Springs were sent earlier in the progress of the disease many serious complications might be prevented and recovery effected in a larger percentage

Army Medical Museum —The total number of specimens received during the year was 890, number on hand June 30, 1896, 33,746

Library —The total number of books in the Library is now 120,344, of pamphlets and theses 199,600 Volume i new series, of the Index Catalogue includes the letter "A" and forms a volume of 828 pages It is now in the hands of the binder and will shortly be ready for distribution The manuscript of Volume ii, new series, is in the course of preparation for the printer, the usual appropriation having been made for this volume

Medical and hospital supplies —The approximate value of the medical supplies actually issued during the fiscal year ended June 30 1896, is $97 697 38

Advantage was taken of the preparation of the new Manual for the Medical Department of the Army to revise the Supply Table included therein Many new remedies were added and the allowance of others was increased where experience had shown this to be advisable Several recent medical works have been distributed for the use of medical officers Appliances for operating in accordance with the requirements of aseptic surgery have been issued to sixty five post hospitals The facilities for prompt and successful surgical relief are now much more satisfactory than they have been Portable bath tubs on wheels, adopted to giving a patient a bath at his bed side in cases of fever, have been issued to most of the posts

The hospital corps —There were in the service June 30 1895, 116 hospital stewards, 82 acting hospital stewards and 530 privates, making a total of 728 men The loss during the year by discharge transfer, retirement, death and desertion amounted to 270 men and the gain to only 249 men, a net loss of 21 men There were, therefore, in service at the close of the last fiscal year 707 men, of whom 106 were hospital stewards, 94 acting hospital stewards and 507 privates, the quota under existing regulations being 741

The appropriation bill provides that no appointment to the grade of hospital steward shall be made *until the number of* such non commissioned officers in service is reduced below 100 As there are now 106 in the corps it is not likely that an examination for appointment to this grade [illegible] ome time to come. Examinations for the position of acting hospital steward were held in November, 1895, and May, 1896. The successful candidates numbering 31 out of 43 recommended for examination have been detailed to duty in their new positions.

The issue of hospital corps knives and side arms has been discontinued. Members of the corps may, however, by Circular No. 2, Headquarters of the Army, A. G. O., Feb. 6, 1896, be furnished with firearms during Indian wars or when left with sick or wounded under circumstances which justify the expectation that their rights as non-combatants will not be recognized.

The new litter, model of 1895, is now being issued to military posts. A new edition of the Drill Regulations of the Hospital Corps was necessitated by the adoption of this hand litter. The litter slings of the hand litter previously in use were attached to the handles of the litter, and in the drill provision was made for the disposition of the sling in all movements. By detaching the sling and making it a part of the equipment of the bearer to be worn over the shoulders with the ends tucked under the belt in front when not in use the drill has been much simplified. When the litter is to be raised or lowered the bearers have merely to slip the loops at the free ends of their slings on or off the handles. Special instruction in the duties of litter bearers and in the method of rendering first aid to the sick and wounded is now given to all enlisted men of the army by their company officers in accordance with G. O. No. 9, Headquarters of the Army, March 13, 1896.

A change has recently been made in the method by which certain of the recruits for the Corps are to be instructed in their special duties. It consists in the disbandment of the company of instruction at Fort Riley, Kans., and the distribution of the men constituting the company in small detachments at selected posts. Hitherto the expense involved in transporting men to a distance has prevented the posts on the Pacific Coast and on the Northwestern frontier from being supplied with men educated in the company of instruction. By distributing the men and educating them hereafter in small detachments, each department will have its quota of men under instruction from which assignments may be made with less expense for transportation than if Fort Riley continued to be the center of distribution. Emergencies in the East will be met as heretofore, by drawing on the company of instruction at Washington Barracks, D. C.

Since the close of the fiscal year favorable action has been taken on my recommendation that the issue and use of a full dress uniform for the men of the Hospital Corps be discontinued. These men even on parades and occasions of ceremony have always to be in readiness to render service in case of accident and sudden sickness. Fatigue uniform is more suitable for such work than the full dress suit. The change will be of benefit to the men otherwise than by relieving them of an unnecessary uniform, for by drawing the value of the discontinued articles in white cotton duck clothing they will have a sufficient allowance for ward service, which has not hitherto been the case.

Army Medical School. The report of Colonel Charles H. Alden, President of the Faculty of the Army Medical School shows the course of study pursued and the excellent results attained during the session 1895-96. I heartily concur in his recommendation that the final rank of the student officers in the army should be made to depend on a combination of their marks at the examinations at entrance into the service and at the close of their school work. At present their relative rank is settled by the results of the examination at entrance and their work during the session does not alter it. A very desirable incentive to secure every advantage from the practical courses of the school would be obtained if the class standing of the students were made to influence their future rank.

Recruiting.—The total number of men examined for enlistment was 17,615, of whom 8,643 were accepted, or 480.83 of every thousand examined. The ratio of accepted men was higher among the colored men, 510.57, than among the whites, 486.46.

Of every thousand accepted recruits 727.18 were natives of the United States, 659.38 whites and 67.80 negro. In 1894 the ratio of native born recruits was 679.99, and in 1893 665.95. Of foreign nationalities Germany and Iceland furnished the largest proportionate numbers, 88.97 and 75.41 per thousand recruits.

The average height of these recruits was 67.51 inches, the native born white recruit 67.68 inches, being somewhat taller than the negro 67.37, and fully half an inch taller than the foreign born recruit, whose average was 67.14 inches. The foreign born recruit had the advantage over the native born white in weight, the former averaging 117.18 pounds, the latter 115.68. The negro exceeded both, his average being 140.85 pounds. In chest measurement and expansibility also the advantage appears to have been with the foreign born recruit, his measurement at expiration and inspiration being 34.80 and 37.73 inches, as compared with the native born white who averaged 34.26 and 37.17. The corresponding measurements of the negro were 34.27 and 36.89 inches.

Identification of deserters.—From July 19, 1890 to Aug. 31, 1896, the whole number of identifications made by means of outline figure cards was 759. Of this number 18 were made in the calendar year 1890, 111 in 1891, 215 in 1892, 104 in 1893, 110 in 1894, 121 in 1895, and 80 during the first eight months of 1896.

The 121 identifications made in 1895 represent the "repeating" element of 4,929 recruits whose outline cards were examined, *i. e.*, of every thousand recruits from civil life 24.55 were identified, through the outline cards, as deserters, military convicts or otherwise bad characters. Fraudulent concealment of former service is still practiced extensively, and but for the almost certain detection indicated by them it is reasonable to suppose that the practice would attain its former dimensions.

Uniformity in medico military statistics.—I have embodied in this report the data concerning the recruiting, sickness and mortality of our army during the calendar year 1895, tabulated in the form suggested by the International Commission of Military Medical Officers which met at Budapest in September, 1894. The Commission recommended that the various army medical departments begin publication with the statistics of the calendar year 1895 but as at this time last year I had at command all the data for 1894 needful to the construction of International tables for that year, I submitted the first set of these tables in my last annual report. Copies of the report were sent to the members of the Committee and to the Chiefs of the Army Medical Departments represented at the Budapest meeting. Reports in exchange are not expected from any of the foreign offices until the publication of their statistic data for 1895.

Medical Department of the National Guard.—The interest taken by medical officers of the Army in the progress and methods of the Medical Department of the National Guard, is well shown by an examination of the program of the sixth annual meeting of the Association of Military Surgeons of the United States, held at Philadelphia, May 12 and 14, 1896. Out of twenty-seven papers announced by the program as to be presented for the consideration of the Association, sixteen were by officers of the medical department of the Army, five by medical officers of the U. S. Navy, and six by officers of the National Guard.

HEALTH OF THE ARMY

It is with much gratification that I report the health of the Army during the year 1895 as having been excellent. All the rates that are usually considered by statisticians as throwing light on the physical condition of a community have been lower than in any previous year of the recorded history of our army. In 1894 we were fortunate in having all the rates except the death rate lower than ever before. In 1895 all the rates except the admission rate for injuries fell below those of the previous years and the death rate below that of 1889, which was the lowest on record. It is customary to compare the rates of an army with those of the other troops, or the rates of a military department, garrison, city or other civil or military community with those of other similar communities. Such comparisons are of value as indicating insanitary influences at work in one place and not in the other. They lead to inquiry into the causation of excessive rates and to the institution thereafter of remedial measures. But to determine the absolute condition of a community as to health it must be compared, not with other people under other conditions, but with itself under its most favorable conditions. Its proper standard of comparison is, therefore, its own best annual record. The nearer it approaches its best record the higher its standard of health under conditions which usually affect the individuals.

That progress is being made in eliminating insanitary conditions or other causes which tend to affect injuriously the health of our troops is shown by the fact that during the past year the sick rates have been lowered so much that they henceforth become the standard of comparison for future years.

The admission rate to sick report numbered 1,110.22 per 1,000 of strength, as compared with 1,089.73 in 1894, the lowest previous rate, and with 1,329.94, the average annual rate for the preceding decade. The average number of days each case was treated was 11.1, as compared with 11.6 and 11.7 respectively for the previous year and the average of the previous decade. The admission rate for disease was only 837.53, as compared with 845.52 in 1894, while the rate for injury was 272.69, as compared with 244.21.

The number constantly sick was 33.89 per 1,000 of strength as compared with 34 49 during 1894 and 41 87 as the average annual rate of the preceding ten years The number of days lost on account of sickness by each man of the army was 12 4, as compared with 12 6 in 1894 and 15 3 during the preceding ten years

The rate of discharge for disability per 1,000 of strength was 9 15, as compared with 13 30 in 1894 and 23 77 annually in the preceding ten years The discharge rate on account of disease was 6 81, on account of injury 2 34 The absolute number of discharges was 250, of which 186 were for disease and 64 for injury

The mortality rate from all causes was 5 16 per 1,000 of strength, as compared with 6 69 in 1894, 7 85 for the preceding decade, and 6 33 in 1889, the year of lowest record Deducting the rate for injury, 1 61, the death rate for disease was only 3 55 per 1,000, and compared with 3 95 in 1889 and with 4 76 in 1885, which until now held second place on our records The absolute number of deaths was 141, of which 44 were occasioned by injury

The mean strength of the command, officers and men, white and negro, from which medical reports were received during the year amounted to 25,204, white 23,195, negro 2,009 The admission rate for the white troops was 1,127 05, for the colored troops 915 88 The admission rate of the latter was smaller than that of the white troops in 1889, in 1892 and in the years following to the present time In speaking in my last annual report of their record of sickness, I characterized it as the most favorable yet shown by the statistics The same remark might be made concerning their record in 1895 Their admission rate for disease was 659 03, as compared with 852 99 among the whites, their rate for injury 256 84, as compared with 247 07, and the duration of each case was 10 5 days, as compared with 11 2 The number of men constantly sick per 1,000 of strength was 26 40 among the colored men, 34 54 among the white, while each colored soldier of the command lost 9 6 days on account of sickness during the year and each white soldier 12 6 days The rate of discharge for disability was 5 03 among the colored men, 9 51 among the whites, and the deaths 4 12 and 5 25, the deaths from disease being respectively 2 74 and 3 62 The susceptibility of the negro troops to disease was noted as greater than that of the whites only in the instances of rheumatism and neuralgia, although it was equal to or slightly in excess in several other diseases, as tonsillitis colic and constipation and conjunctivitis

Health of the military departments —The admission rate varied 798 32 in the Department of the Columbia to 1,355 63 in Texas It was above the army average only in the Departments of Texas, the East and the Platte The rate of constant sickness was highest in Texas The Departments of the Columbia, Dakota California and Colorado had low rates, the other departments did not differ much from the army average The Department of Texas had the worst record, the Department of the Columbia had probably the best, closely followed by the Departments of Dakota and of California

Four posts during the past year had admissions to sick report in excess of two entries per man These were Fort Myer, Va , with a rate of 2,800 00 per 1,000 of strength, Washington Barracks, D C , 2,137 74, Fort Slocum, Davis Island, N Y , 2,103 45, and Fort Ringgold, Texas, 2,078 21 Malarial infection was the principal cause of these high rates at the first two posts, but not at the other Five posts had the rate of non efficiency or constant sickness over 6 per cent of the strength Forts Brown, McIntosh and Ringgold, Texas with rates per 1,000 of strength respectively of 70 69, 64 05 and 63 92, Fort Myer, Va , 63 78, and Columbus Barracks, Ohio, 60 65 Washington Barracks, D C , although second in sequence of high admission rates, had a constant sickness of only 46 18, standing eleven in point of non efficiency while Fort Brown, Texas, although heading the list of non efficiency stands fourteenth in sequence of admissions

Six posts gave admission rates of less than 600 per 1,000 of strength Fort Yellowstone Wyo , 422 02, Alcatraz Island, Cal 461 54, Fort Wayne Mich , 484 62, Fort Porter, N Y , 515 62, Fort McPherson, Ga 566 14, and Fort Missoula, Mont , 578 75 Twelve posts reported a constant non efficiency of less than 2 per cent of the strength and among them were the posts of Plattsburg Barracks, N Y , Fort Wayne, Mich Fort Huachuca, Arizona, and Benicia Barracks Cal Fort Stanton, N M , had less than 1 per cent constantly sick, only 8 26 per 1,000 of strength

PREVALENCE OF SPECIAL DISEASES

Influenza prevailed to a somewhat greater extent than in 1894, 1,156 cases as compared with 875 The disease has continued since the close of the calendar year and [illegible] pected to form a notable part of the record of [illegible]

Diphtheria —Only a few cases occurred among the troops Several interesting reports on the use of antitoxin have been received The opinion of Army medical officers is decidedly favorable to its use as a prophylactic

Typhoid fever —One hundred and nine cases, 13 of which were fatal, were reported during the calendar year This is an improvement on the average annual prevalence and fatality of the preceding ten years, 138 5 cases, of which 19 2 per cent were fatal Of the cases during the past year, 12 per cent were fatal and the mortality per thousand of strength was 48 This latter rate can not be considered high, as it is exceeded by the typhoid mortality rate of most of our cities, notwithstanding the great susceptibility of soldiers on account of the predominance of young men in the ranks

On account of the uncertainty concerning the nature of the fevers reported from some of our western posts as Texas fever, continued fever, etc , a call was made from this office, Aug 30, 1895, on the medical officers of certain posts for a special study of the fevers during the season of prevalence Very excellent reports were rendered, but, as a rule, the assistance afforded by a careful microscopic study of the blood was not fully utilized in the differentiation of the cases

Malarial diseases —The admission rate for malarial diseases in 1895 was 82 56 per 1,000 of strength, and the rate of non efficiency 1 70, the former higher, the latter lower, than the corresponding rates for the previous year, 71 72 and 1 88 respectively, but both considerably lower than the average annual rates of the preceding decade, 103 32 and 2 57 The lowest admission rate on our records was reported in the calendar year 1891, 62 23, with a non efficiency of 1 58 Although some of the posts in New York, such as Fort Hamilton, Fort Wadsworth, Willets Point and West Point, contributed to the increased rates, the two posts on the Potomac River, Fort Myer, Va , and Washington Barracks, D C , were the main source of the increased rates, the former having 1,092 59 admissions and a non efficiency of 14 07 per 1,000 of strength and the latter, 1,079 89 and 13 71 Major Walter Reed Surgeon U S Army, investigated the character, prevalence and probable causation of the malarial fevers at these posts From a close study of the conditions, he came to the conclusion that in both instances the prevalence of the disease was due to the marsh lands of the Potomac valley

Diarrheal diseases —These diseases have been diminishing gradually in prevalence The admission rate was only 85 11 per 1,000 of strength, as compared with 91 77 during the preceding year and with 129 26 as the average annual rate of the preceding decade As a rule, the cases were trivial, the rate of non efficiency for the year having been only 78 per 1,000 of strength

Venereal diseases —The admission rate for venereal diseases, 73 72 during the calendar year 1895, was less than that of the preceding year, 80 43, and less than the average annual rate, 76 32, of the preceding decade The non efficiency associated with all these rates did not vary much, being a little over 5 per 1,000 of the strength The relative prevalence was greater among the whites than among the negroes, the admission rate of the latter having been only 52 26 In 1893 the admission rate of the colored troops fell below that of the white, and it has so continued since then

Alcoholism —The admission rate for alcoholism, 30 11 per 1,000 of strength is a slight improvement on that of the previous year, 30 94, but a great improvement in the average annual rate, 44 20, of the preceding decade The rate of the colored troops was, as usual, low, 6 17

Rheumatic affections —The admission rate was somewhat larger in 1895 than in the previous year, 64 08 per 1,000 of strength, as compared with 63 33, but the discharges for disability numbered only 12 as compared with 21 The improvement in the health of the troops of late years may be seen by comparing these figures with the average annual admission rate of the decade 1884-93, 83 34 with 55 2 discharges for disability

Tuberculosis of the lungs The rates for tuberculosis of the lungs were smaller this year than last Admission 2 42 discharge 1 06, death 37, as compared with 2 96, 1 59 and 61 They are considerably smaller than those of previous years, for the prevalence of consumption among the members of the Indian companies gave high rates as the [illegible] he previous decade It is to be noted also that [illegible] st two years the rates [illegible] mong th [illegible] ave fallen so as to [illegible] fc formerly they

Injuries —T[illegible] than in 1894 when [illegible] average annual ra[illegible] the relative r no corresponding increase in their severity, for the non efficiency, 8 46, was somewhat less than that of the decade cited

Nineteen cases of suicide were reported, as compared with 18 during the previous year

Radical cure of hernia —In September, 1895, after considering fully the results attained by surgical treatment in the radical cure of hernia, together with the small amount of risk involved in the operation as now conducted under careful aseptic supervision, I came to the conclusion that the operation might be made available to preserve good soldiers, although ruptured, in the service and to lessen the number of men discharged for disability and subsequently pensioned for hernia The annual loss of men by rupture has always been considerable During the six calendar years ending Dec 31, 1894, 153 men were discharged I did not consider that the progress of surgery warranted a resort to operative proceedings in all cases, but felt confident that surgical interference would enable many to continue in the military service, or earn their livelihood with comfort in civil life, who are now discharged and pensioned for hernia

Since September, 1895, twenty nine cases of hernia have been treated by operation with the most satisfactory results so far as can be determined at this early date This gives an excellent promise of future benefit in cases that have been hitherto regarded as disqualified permantly for military service

THE SANITARY CONDITION OF THE ARMY

Quarters —In four instances during the course of the year attention was specially invited by medical officers to the insanitary and generally worthless condition of the barrack buildings at their posts The barracks at Fort Preble, Maine, were characterized as very old and not worth repairing At Fort Custer, Montana, the barracks with one exception are old and dilapidated, all the floors uneven, worn through in places, and so near the ground that the subfloor space can not be cleaned nor inspected except by taking up the floor The dilapidated condition of the buildings at Whipple Barracks, Arizona, has been reported on various occasions They are overcrowded, draughty and poorly ventilated Estimates for additions to relieve the overcrowding have been disapproved In July and August, 1895, the improvement of this post was again discussed and urged strongly by the Chief Surgeon, in the hope that early and favorable action would be taken by the War Department

The marked improvement that has been made during the past few years in the sanitary condition of our military posts, is specially manifest in the fact that during the past year no report was received concerning the crowded condition of prison rooms or guard houses, nor concerning the want of ventilation or repair of the buildings occupied for prison purposes Formerly unfavorable criticism on the quarters provided for men under guard was as common as it is now infrequent

Drainage and sewerage —At the large and important post of Fort Meade, S D, privy pits are still in use, a suitable sewerage system will no doubt be considered with the reconstruction of this post The privy pits at Fort Keogh, Montana, also should be filled up, and replaced by the dry earth system until sewers are built

Concerning the efficiency of the dry earth system there is ample testimony from the experience of many military posts Where complaint is made there is found on investigation to be some want of the necessary care in carrying out the details of the method As an instance in point, it was reported of one post during the year that "in only one closet was any dry earth found, and in that no evidence of its systematic use" The action taken by the post commander on this report was to call the attention of company commanders to this negligence and on his next inspection the surgeon found the dry earth closets in satisfactory condition

Water —A temporary scarcity of water was reported from several posts, as Fort Canby, Columbus Barracks, Fort Grant and Fort Monroe The bad quality of the river waters used at certain posts, as Jefferson Barracks, Fort Leavenworth and Fort Custer, was specially noted by medical officers, who recommended filtration for their purification The Las Moras Spring at Fort Clark appears now to be protected from inflow of surface water The discovery of a spring at Fort Reno furnishing a water similar to that of Caddo Springs, will greatly benefit that post There has been much activity during the year in improving the water supplies of military posts Medical officers take special interest in the subject, and the Quartermaster's Department has carried into effect many suggestions for extension and improvement

Food —The food of the men has been reported almost uniformly as ample in quantity, of excellent quality, and well cooked

Clothing —In my last annual report I had occasion to invite attention to adverse criticism by certain medical officers on the quality of the leather in the shoes issued to the troops No such criticism is found in the reports of the present year, yet in one instance a number of men were disabled on a practice march by abrasions and inflammations of the feet, attributed to ill fitting shoes The shoe now furnished by the Quartermaster's Department appears to be of excellent quality, make and shape, and there seems to be no reason why men should be disabled on a practice march if proper care is taken in having their shoes adapted to the feet before the march is undertaken Men who begin a practice march simultaneously with the process of breaking in a pair of new shoes, are likely to suffer from chafings or undue pressure, which may disable them temporarily and unnecessarily

The various articles of clothing have been of good quality, and suitable to the climate and service

Habits of the men —The remarks on sanitary reports concerning the habits of the men are generally satisfactory, and are corroborated by the lessened rates of the past year for venereal diseases and alcoholism

Facilities for personal cleanliness have been greatly improved at our military posts during the past few years At present they are rarely referred to as inadequate

Gymnastic training and athletic sports are held responsible by many medical officers for the increase in the number of injuries during the past year Their view is no doubt correct, but since the increase was not manifested in the rate of non-efficiency it is evident that the extra cases which raised the admission rate above the average of the preceding decade, were not of a severe character The accidents of the gymnasium and the athletic field are offset by the benefits derived from the training Men are drawn away from vicious habits which tend to increase the sick list, and the ability of the system to withstand harmful influences is greatly increased Hence, although the list of injuries is enlarged by the practice of athletics, the rates of disability from injury and disease are less than in previous year in the history of our Army

Respectfully submitted, GEORGE M STERNBERG
HON D S LAMONT, Surgeon General, U S Army.
Secretary of War

SELECTIONS

Serum therapy —A fermentation has been going on in medicine for the last century, as a sign of which the systems in rotation appear on the surface and after a longer or shorter length of time disappear to, who knows at what future date, start the game anew The present is the age of serum therapy. About a hundred years ago the "humores" also reigned, although in a different way Humoral pathology, which supposed the seat of disease to be in the fluid constituents of the body, was suddenly replaced by cellular pathology The microscope taught us that the tissues consisted of cells which to a certain degree were independent organisms and upon whose *functions depended the fate of the entire organic* structure But as no footing could be found in the cellular pathology, the research was continued in other directions

On the one hand there developed by the aid of botany and chemistry a modern scientific pharmacology, while on the other side pharmacologic remedies were entirely discredited This led to the formation of the nihilistic school, which at least had the advantage of making unprejudiced observations

The development of the physiology of to day has led us, at the instance of the discovered normal and diseased functions, to judge the therapy of the latter quite different It was the development of a new physiologic school But now again the microscope discovered new things, bacteria, bacilli, microbes, and instantly all diseases were ascribed to these microorganisms The next step was for chemistry to appear on the scene with microbe killing remedies, and as it at the same time furnished a few new analgesics and febrifuges a temporary armistice was secured The observation, however, that it was not the microbes as much as their poisonous products that were in question, soon again aroused those who would rest on their laurels Chemistry was combined with bacteriology to solve the enigma by isolating the poisonous products and experimenting with these. This led to their inoculation, as it appeared that these products were poisons for the microbes themselves, as for instance alcohol and yeast enzyme. According to this scheme tuberculin was inoculated a few years ago. The danger of this inoculation, however, soon showed the fallacy of the theory, and investigators sought after a perfection of the idea. As the latest result of their efforts we have the serum treatment. Serum therapy can only be understood when we follow the train of thought which lies at the base of inoculation.

As an original form of vaccinating there was prevalent in China and India direct transmission by injecting pock virus. In place of this, clothing used by smallpox patients was sometimes worn so that at an opportune time they might also pass through the disease, probably during a light epidemic, as in those days smallpox was considered as measles and scarlet fever are to day, which according to our mothers and grandmothers every child must have had.

Vaccination also came into practice by reason of its serving as a quietus for those mothers who had to send their sons to India, being thereby enabled to nurse them at home, instead of having them plague stricken in a foreign clime. But as inoculation of pock virus demanded too many victims, surgeon Jenner conceived the idea of inoculating cowpox, which he considered transmitted smallpox. As this vaccination in comparison to the former inoculation was comparatively harmless, it soon gained favor and still continues so, although no explanatory theory was then advanced or ever since given, and in spite of being contrary to all modern laws of antisepsis.

One could imagine, and this many an adherent of the vaccination theory does to his own satisfaction, that as a rule a person gets measles and scarlet fever but once, this would be applicable to all infectious diseases and especially to smallpox. In reality this is neither the case in smallpox, diphtheria nor any other disease. However, following this supposition it has been said that, having had smallpox, protects from smallpox, and further that passing through a mild form of pox, that is vaccination, also gives the desired protection. After the word "protects" was unobservedly smuggled in, nothing remained to be proven, and up to the present day the votaries of vaccination have owed us a satisfactory explanation.

In every falsehood there is, however, contained a kernel of truth. If we will, namely, observe more frequently that during the existence of a febrile disease, the afflicted one is not susceptible of other infectious diseases, as owing to the increased vital activity, increased oxidation etc., a second attack is more easily warded off, we can also admit that an artificially produced febrile reactionary condition as is produced by vaccination will give a certain protection for a short time. This protection can, however, not last longer than a few weeks, it will therefore be seen why sober observers recommend the unusual repetition of vaccination. The principle of vaccination, however, was established and has held its own alongside of all change of theories. In the course of time, all possible kinds of vaccinations patterned after both "inoculation" and the "moderated vaccination" have been tried. But syphilis inoculation as well as cholera, hydrophobia and other vaccinations were soon abandoned. The same fate was shared by the tuberculin inoculation, as they all did notoriously more harm than good.

Research was continued, but this time from the only correct standpoint why certain persons were immune, i. e., proof against contagion. These individuals, whether man or beast, must contain within themselves a protection. This protection could be found only in the fluid tissues, the all permeating blood, as the different tissues are too dissimilar to contain protective matter. The theory was advanced that serum, the blood fluid of an animal which had overcome an infection, as for instance diphtheria inoculation, should be injected into other animals in the supposition that the serum contained a contra poison, an antitoxin. This is Behring's serum therapy. According to my notion we again have one foot in the too readily discarded humoral pathology, and I can only express my rejoicing at this, as there is more contained in a humoral pathology modified according to our latest physiologic and chemic knowledge than many a one would dream. We will accept as undoubtedly correctly observed the fact that the injected serum of an animal having survived an infection gives a certain protection to another animal or in other words puts it in a better condition to withstand infection. We, however, lack conclusive evidence, whether so large a quantity of serum (about 1 gram to 1 kilo body weight) of a healthy, unprepared animal is also capable of producing this so called immunity in an infected one. It can be admitted that the addition of so large a quantity of serum, an excellent nutrient fluid, awakens, that is, strengthens the vital energy to such a degree that the weaker organism acquires the ability of the naturally immunized one to conquer the intoxication. The blood has so many chemic and physical properties, the body so many protective contrivances, such as fever, etc., that one can not make an apodictic assertion as regards antitoxins or counter poisons. Professor Buchner (Munich) has proven by experiments on animals that antitoxins are altogether out of question, as the chemic quality of the animals experimented on has an important bearing on the case. The originally immune animal can not possess any antitoxin, beside during the course of an infectious disease a number of reactions take place which tend to make the introduced injuriousness harmless. In this regard Buchner's principles may eventually play an important part. But even admitted that Behring's theory is correct, what good is it? They claim the mortality to have dropped from 50 per cent. to 25 per cent. in diphtheria. Admitting the correctness of the statistic observations I still find the rate of mortality so high that I would hardly venture to use it as an argument. Beside it is openly admitted that where, as there usually are in severe cases, streptococci are present these cases are not affected by the serum. Well, in the milder cases I use no other remedies but those I have explained in my treatise[1] years ago and which we more or less all use. In severe cases I really need no assistance either, besides such an assistance is made directly impossible by the antitoxin treatment. We can, therefore, not use this kind of serum therapy. The contagionists have repeatedly stated: "Live as you please, only be sure to get vaccinated in the opportune moment." This is surely not according to the laws of hygiene. Consequently serum therapy is no hygienic triumph. Undoubtedly, and we should not be misled by this, the serum therapy will be longer lived than any previous inoculation method, as it is relatively harmless. But the lack of success will ultimately kill it off.

Those who know what weapons have been employed to conquer diphtheria, will also lend a willing ear to the objections of those skeptics who attribute the lower rate of mortality in diphtheria under the serum treatment, to the absence of the old drug poisons. Add to this, better nursing and the possibility of the serum being a blood nutrient, and why should there not be good results?

We likewise obtained good results during the first period of tuberculin inoculation, because the patient's appetite was no longer impaired by giving creosote and the "interesting cases" were better nursed. If we start with the principle that the healthy organism contains a protection, probably protection matter and possibly antitoxins, then the only sensible thing to do is to investigate the protective power and by correcting the mode of living and the like and to impart it to those individuals who on account of want of natural protection are in need of it. This is the opinion of the individualists who find within the quality of the individual the riddle which is being tried to be solved without

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[1] Die wichtigsten Kapitel der natürlichen Heilweise. Stuttgart. Zimmer's Verlag.

I think there are animals and human beings who are relatively immune against all infections Against certain poisons they are positively proof, others by means of chemic and physiologic protection contrivances, they conquer We can impossibly vaccinate against all infectious diseases from the beginning, that means to vaccinate the sucklings Furthermore, we can at the decisive moment, that means in case of sickness, only vaccinate in the culture centers against all possible attack, presupposed we had "antitoxins" for every disease, but so far we only have the diphtheria and tetanus antitoxins, of which the latter has proved itself useless (Relatively speaking, in the meantime barring other therapeutics, people would have to keep on dying for years, as it would take that long before all the antitoxins would be discovered) It is moreover uncertain whether great damage is not done the body by inoculating various antitoxins, which according to Buchner are toxin derivatives and related to the toxalbumins

On one hand we do not care to wait so long, on the other we must go to work with more logic, expecting nothing from uncertain remedies, but aspire to acquaint ourselves with the relatively universal immunity and its conditions That the universal immunity is not sparingly distributed among human kind is proven by the mere existence and constant increase of humanity, which in spite of thousands of years of aggression by all possible plagues has held its own and, as it appears, has acquired a natural immunity against pestilence, typhoid and smallpox

In this field of natural immunity by leading a hygienic life have I and others, in theory and practice, rendered such service that we have therapeutically gained such an ascendancy over the votaries of serum therapy, who not until now—and that in the wrong light—have taken the individual into consideration so that a better hygiene and therapy than we have against infectious diseases can not be found anywhere to day I do not wish to cite statistics, but on request any physician of our school will stand ready to treat diphtheria cases under control with a smaller resulting mortality rate than can be obtained by means of the so called serum therapy It is our object to make *our own* serum of the best possible kind and quality

Presupposing that my doctrine of dietetic blood diathesis[*] is well known, we have in it a lesson which if applied to our diet and mode of living, will bring the protective power of *our* serum to its normal height, *i e* , will make us relatively immune The quintessence of our doctrine is the proof that the reduced alkalinity of the blood of civilized men can by dietetic means be brought back to its normal strength According to Von Fodor and others the degree of alkalescence of the blood is proportionate to its immunizing power, which experimentally proves the correctness of my views on serum therapy While in a case of mixed diphtheria with streptococci the physician applying diphtheria antitoxin is helpless, the organism made relatively immune by means of dietetics is able by way of its innate protective power assisted by appropriate external remedies to successfully combat such cases

For the forgoing reasons I have no fear in my own behalf in acute diseases such as diphtheria for instance, as I know the quality of my body and its serum Not so with others whom we know to be filled with autotoxins, as the cause of the disease, be it organized ferment, a microbe or a chemic ferment, an enzyme liberates them For the body of the majority of the population, who are governed by false dietetics, is overloaded with insufficiently assimilated albumin and insufficiently oxydized substances which by contact are doubtlessly changed into toxalbumins (Compare Ernest Krauss in *Zeitschrift für physicalische Chemie*, Band xviii, Heft 2 "Über die Ausnutzung der Eiweissstoffe in der Nahrung in ihrer Abhängigkeit von der Zusammensetzung der Nahrungsmittel ") Krauss proves that where albumin is freely taken as nourishment, only part of the albumin is changed into peptone, the other part decaying in the bowels, "by which on account of the presence of a large quantity of decayed matter the body is only injured "

Upon the chemic condition of the body, not upon the amount of infection depends the severity of the case The microbes do not easily gain access to the inner body, but the toxins do, which doubtless, being relatives of the enzymes, are also capable of developing results like these They furnish us with new dissecting matter, that is, loosen the vital process (fever and oxydizing), the deposited decayed matter, autotoxins in the real sense of the word With the autotoxins lies the danger They injure the heart and the kidneys and do harm, when that little diphtheritic toxin has long been made harmless

It is interesting to note that Professor Escherich (Graz) in No 22 of the *Wiener klinische Wochenschrift* presents the following theses covering my views

1 For the appearance of diphtheritic disease there is necessary, beside the bacillus and the possibility of its invasion, a specific receptiveness of the organism about to be infected

2 The condition of the local and general disposition, the greater or less degree of virulence of the bacillus, the latter only secondarily considered, are a criterion for the termination of the case

3 Also other and even saprophytic bacteria, besides their products, may have an effect on the spreading and the clinic termination of the process

I consider the third thesis a circumlocution of what I understand by autotoxin My therapy in diphtheria is therefore primarily aimed to put out of the way the autotoxins The evacuation of the lower gut by means of injections furnishes to us in ninety cases out of one hundred such a terribly smelling stool which differs distinctively from other fever stools, which are usually dry and not so fusty, this being my reason for thinking that diphtheria is a general instead of a local disease, as now supposed

By these means, at least, dangerous products of decay are prevented from being absorbed The next thing for us to do is to remove the autotoxins by means of increased perspiration and eventual transpiration, by reason of which long lasting partial or entire packing, eventually sweat packing, are brought into question By increasing perspiration and transpiration, the almost constant relative hydremia is done away with

Finally, for nutrition we will not choose albumins, as these, under the conditions, would be the same as poison Moreover, we will introduce into the serum the mineral substances, nourishing salts in the shape of readily assimilable fruit juices and lemonades, and keep the body with the sugar and water of them in a sufficiently nourishing condition, without especially burdening the gut

That is my position toward serum therapy Behring's serum therapy is a very interesting scientific problem Therapeutically considered it represents a byway which, on having recognized the truth that our own serum should and will solve the problem, as a rule comes too late to be of any service to the patient — Read before the Congress of Physicians at Nurnberg (Germany), by H Lahmann, M D Translated by Carl Strueh, M D , Chicago

Morphin Antidote to Cyanid of Potassium —Heim discovered recently in the course of some experiments that animals which had received a fatal dose of potassium cyanid were saved by the injection of a non fatal dose of hydrochlorate of morphin This effect seems paradoxical, as the two substances combined in the laboratory produce only a precipitate of pure morphin and the elimination of free hydrocyanic acid — *Semaine Méd* , September 23

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[*] Die diätetische Blutentmischung als Grundursache aller Krankheiten Leipzig, Otto Spamer

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or re-integratively upon the visual substances, is against all known chemic or physical laws It is hard to understand how the diminution of all rays can cause an increase of the "black" rays There is also difficulty in conceiving the existence in the same space of three different chemic substances that change, not only singly but two or three together, under the influence of the light rays received, and do this in two different ways, assimilatively and dissimilatively.

Finally, neither of the two theories is satisfactory in explaining the union of the different primary color substances into the complex ones, red and yellow or red and blue, for example

In order to meet these difficulties he points out, TSCHIRIEW offers a theory of his own In the first place he accepts MUELLER'S law of specific energies in a rather wider sense than has been hitherto admitted, allowing variations in quality in the homogeneous sensations derived from a single excitation of it did not sufficiently suggest the possibility of failures of color perception not dependent directly on its defects. Men have written on the color sense as if consciousness extended down to the peripheral termination of the optic nerve, or perhaps it should be better stated, as if color perception there took place. HELMHOLTZ, HERING, TSCHIRIEW, FICK, or any other theorizers on this subject have really only the task of producing a hypothesis that will account for the phenomena under normal conditions of the higher visual centers, the derangements of these latter afford an unknown, but certainly extensive, range of possibilities of morbid alterations or defects of the color sense.

The theories of the author here quoted may not be altogether new, indeed, it appears possible some of them may have been emitted before, but they are in their way suggestive and noteworthy. His paper contains some other points worthy of mention, such as his statement that white as a sensation is not the result of the blending of all the spectral colors but is simply the effect of the reflection of uncolored light by minute particles under certain special conditions. It is one of the suggestive contributions to the literature of the subject, whatever may be the ultimate estimate of the views it presents.

LAY DISTRUST AND ENMITY OF THE MEDICAL PROFESSION

For two thousand years or more the medical profession has waged a ceaseless war to obtain the fundamental condition of medical knowledge and progress, *i e*, dissection material, and to-day many medical colleges are compelled to import from long distances and at a crippling expense an insufficiency of cadavers.

Ever since the rise of the scientific spirit in modern times the use of animals for experimentation, quite as necessary a prerequisite of medical progress, has been bitterly and violently opposed by the non-medical world, and to day that opposition is more dogmatic and furious than ever.

The lay world, as regards both private individuals and governments, is so indifferent to or suspicious of us that while endowments, scholarships, etc, running into millions exist for the encouragement of the study of languages, astronomy, theology, etc, yet medical education and medical students are left solely to self-interest, with almost no endowments to help what is the first necessity of human life—health and the eradication of disease.

The one benefit of most proved and patent service to humanity, which medicine has given the world—vaccination—finds everywhere, but especially in England and America, thousands of bitter opponents. One of these in a speech in England as regards the recent Gloucester epidemic where hundreds sacrificed their lives to the craze, has the audacity to utter the following words: "Gloucester presented circumstances and cases which proved undeniably that vaccination was nothing but a delusion and a snare and that insanitation was the real tap-root of the whole of the sufferings of that poor, miserable, devoted city. During the panic the doctors had been piling on the agony and pocketing the plunder and scattering people through the length and breadth of the country with their arms in slings as if they had just returned from a great European war."

Lastly, the opinion of the lay world is made still more plain by the facts of the oceans of "patent" or secret nostrums eagerly bought and devoured by it, by the long struggle, still going on, to obtain medical practice legislation to root out quackery, and by the avidity with which it supports medical sectarianism and quackery in the regular profession.

Such facts as these might be multiplied indefinitely.

Upon the other hand, every intelligent physician has the sincerest and most well-grounded conviction and consciousness that the profession taken as a whole is more unselfishly and more successfully devoted to the alleviation of suffering—of the very people (and their children) who hate that profession—than any single body of men of so large numbers the world has ever seen.

All this being true, one is almost disheartened at the ingratitude, the stupidity and the brutality of our enemies. Why labor for a united world that scorns the help and hates the helper, blind and ignorant of its own true need and inobservant of its best friend? Beyond a doubt it is the recognition of this very fact of the combination of ignorance and need of the world that sustains the devotion to duty of many physicians and keeps them from joining the ranks of the shrewd self-seekers. The poor victims of their own hate and egotism and ignorance are of course too pitiable to be either duped or detested. They are in truth pathologic specimens of society and history, and a man with any largeness of character can not upbraid or punish or despise a bit of morbid tissue, whether sealed in alcohol or washed up in the world's sewage. The cold-blooded will study it and philosophize about it, the warm-blooded will commiserate, and both will regret the disease and malignity that produced it and smile lukewarmly at the passion which fires the hearts of the monomaniacs.

Two things remain to prevent despair. The first is that we are gaining, slowly perhaps but still surely, in our warfare against disease and ignorance as the lessening death rate certainly shows, and secondly, a progressively increasing number are recognizing that the acceptance of the selfish and personal end would bring no added happiness. We are winning more and better allies in the lay world, and the insatisfaction of a wholly greedy life is becoming always more evident to a larger number of physicians. When struck by some particularly ugly fact—some triumph of quackery, some victory of a blatant or sly self-advertiser over honesty and modesty—we may be tempted to cry, "It's no use! We might as well give up!" But a large and healthy outlook and overlook will at last convince that there is a decided and clear measure of progress being secured with every generation's passing.

The puzzling fact remains to challenge our ingenuity. Why this persistent opposition? Viewed simply as a psychologic riddle we can not help being struck by the incongruous and egregrious blundering of the lay world in so hating the profession which is seeking only the good of the hater. Why this century-long bitterness and malignity of spirit, reaching even to ludicrousness in the diatribe of the poor fellow who charges the doctors with "pocketing the plunder," the fees for vaccination from the be-pested Gloucester folk. To take another instance, doubtless many anti-vivisectionists are in reality tender-hearted people, but doubtless also many are spurred to their violence not by pity of the "victim," but by hatred of the "vivisectionist." Macaulay said that the Puritans opposed bear-dancing, not out of pity for the animal, but because it gave pleasure to the spectator. In every one of *Life's* cartoons or silly lunges on the subject of vivisection one sees that the bitterness of spirit against physicians is many times stronger than any sentiment aroused by the sufferings of the animal.

After all deductions are made on account of inherited love of magic and miracle-mongering, one is finally driven to believe that the fundamental cause of the hatred of Lord Omnes for us is due to his utter inability to realize that men can have any abiding motive of conduct that is not in its last analysis selfish. He knows in his own heart that if he were a physician he would practice vaccination, not for the good it would do, but because of the fee he should derive from performing the operation. According to his philosophy the preacher makes better wages and with less labor by preaching than he could by business or farming or shoveling, and so with the rest of the "parasites." Feeling that such are his own ethical standards, he must believe they are also those of all others, and the half-hidden consciousness that it is not so with these others arouses in his own heart a tempest of passion to keep the voice of conscience from being heard. Then, too, we have in every city and town self-advertisers, quacks within the profession, whose trickeries are so manifest as to strike the attention of all, and seeing these the profession-hater sticks his tongue in his cheek and gloats over the supposed fact that this particular charlatan, as he thinks only exposes what the others are more shrewd in hiding, and that at last, if it were known, w [illegible] "all alike [illegible]

And thus it comes to the moral, that there [illegible] enemy so harmful to the profession as the one within our own ranks who hypocritically pretending acceptance of the higher standards of conduct of the guild, in reality practices the greeds, charlatanism, and self-seeking.

EMPIRICISM VS. WORKING HYPOTHESES IN THERAPEUTICS.

The excuse most strongly advanced by the charlatan for his existence is the specious one that therapeutic discoveries are all the results of chance empiricism. This plea is reiterated by physicians whose mental indolence limits them to what are most absurdly called the "practical" (but more properly the "receipt book") side of medicine, just now exploited at the expense of the profession, by certain advertising Hahnemanniac "free doctors." The shallowness of the scientific foundation of the "receipt book doctrine" contrasts markedly with its wide acceptance. Many physicians fail to recognize the great truth pointed out by Claude Bernard that, "All natural philosophy is summed up in this: To know the law which governs phenomena. The experimental problem reduces itself to this: To foresee and direct phenomena. It will not satisfy the experimental physician, though it may the merely empirical one, to know that quinin cures ague. The essential thing is to know what ague is and to understand the mechanism by which quinin cures. All this is of the greatest importance to the experimental physician, for as soon as he knows it positively, the fact that quinin cures ague will no longer be an isolated and empirical fact. This fact will be connected then with the conditions which bind it to other phenomena and we shall be thus led to the knowledge of the laws of the organism and to the possibility of regulating their manifestations. A striking example can be quoted in the case of scabies. To-day the cause of this disease is known and determined experimentally, the whole subject has become scientific and empiricism has disappeared. A cure is surely and without exception effected when the patient is placed in the condition known to produce this end. This is the purpose of physiology and medicine, to make oneself master of life, in order to be able to direct it." Even the briefest examination demonstrates that therapeutic discoveries were never made by chance empiricism, but that all result from working hypotheses which though often fetichistic in origin had excellent results. One excellent *illustration is the famous* doctrine of signatures, which though badly abused from forced interpretation, strongly stimula [illegible] search. One most [illegible] idence of the ority of even fetic [illegible] eses t [illegible] emp [illegible] sm is the p [illegible] (f [illegible] e Aryan [illegible] nts ing to Greek myth, was fed on honey from the sacred ash and from bees. Among the ancient Germans that sacred food was the first put to the lips of the newborn babe. So it was among the Hindus as appears from a passage in one of their sacred books. The father puts his mouth to the right ear of the newborn babe and murmurs three times, "Speech, speech." Then he gives it a name. Then he mixes clotted milk, ash and bee honey and butter, and feeds the babe with it out of pure gold. In the Highlands of Scotland at the birth of an infant the nurse takes a green stick of ash, one end of which she puts into the fire and while it is burning, receives in a spoon the sap that oozes from the other, which she administrates to the child as its first food. Some thousands of years ago the ancestors of this Highland nurse had known the *fraxinus ornus* in Arya (KELLY, Indo-European Folk-lore) and now their descendant, imitating their practice in the cold North but totally ignorant of its true meaning, puts the nauseous sap of her native ash into the mouth of her hapless charge. The old crones who haunt the obstetric chamber often practice these antique methods of warding off evil spirits, or, as the crones would phrase it, preventing bad luck. The laxative quality of ash honey evinced the beneficent fetichistic effect of the drug, since, according to a folklore principle (still accepted by certain races), constipation is one of the means "whereby the devil worketh," to quote BAXTER, the seventeenth century Puritan. Because of the tendency of fetichistic explanation to vanish with advance in culture, the original working hypothesis (on which manna was given) disappeared to give place to the purely laxative principle. This slow development of a humble laxative from the awe-inspiring sacred ash (the Ygdrasil of Scandinavian mythology) significantly demonstrates that even the slightest scientific discovery is not suddenly made, but is the product of a long evolution whereby, as SHELLEY sings:

> "Thought by thought is piled till some great truth
> Is loosened and the nations echo round."

The physician who fails to recognize the great truth here enunciated aids the quack who pretends to discover stolen and distorted ancient therapeusis.

SOCIAL STATUS OF THE BRITISH MEDICAL PROFESSION

The completion of the sixtieth year of Queen Victoria's reign will doubtless be marked by the usual anniversary creation of peers, baronets, knights, etc. At present it seems probable that, as usual, the British medical profession will compete with fertilizer and sausage manufacturers for baronetcies and knighthood but will not dare to rival the lordly distillers and brewers in the race for peerages. The British medical profession, during the present century, far from occupying a high social status, has always been viewed askance by the present Queen and her uncles. It disproved the foul calumny, unworthy even a village gossip, which the court clique launched against the Queen's unfortunate maid of honor, Lady FLORA HASTINGS, whose sarcomatous uterus was proclaimed by highest authority evidence of unchastity. The bitterness with which most of the WETTINS regard the medical profession was voiced by that master of billingsgate, the Duke of Cambridge, when the British army medical service was given a definite status, a reform struggled for by almost all that is illustrious in nineteenth century British literature and science. The Duke thus addressed the surgeon-general of the army whom he met at a dinner soon after it had been decided by the government to give official rank to members of the medical department:

"Good evening, Surgeon-General, or Field Marshal, or what the —— they call you now, I don't know how to address you, you with your new titles, I don't know what the —— I am myself, I suppose you expect me to take my —— hat off to you, what —— do you —— fellows want?"

This view of the British profession is so accepted by the snobocracy that the Duke of Westminster will not let residences on certain London streets to "medical men or other minor tradesmen." The sixtieth anniversary of VICTORIA's reign seems a good time to raise the social status of British medical men by the creation of medical peers. It should be remembered in this connection that one of the greatest families of the present period traces its recent ancestry to a surgeon-apothecary, HUGH SMITHSON. He, a century ago, on marrying the peeress of the PERCYS, was created Duke of Northumberland in 1766. It was suggested that his ducal coronet bear senna leaves in lieu of the usual strawberry foliage. The English peerage marks social status in Great Britain. There is no reason why, in view of the regard shown physics in the peerage of Lord KELVIN, medical science should not be equally recognized. The House of Lords of the "crowned republic" could with advantage bulwark itself by medical members against the rising tide of democracy.

CORRESPONDENCE

Paracelsus

CHICAGO, Oct. 19, 1896.

To the Editor:—On page 879 of THE JOURNAL is a clipping which presents the life and character of Paracelsus in somewhat too roseate a hue. When I was at Salzburg in 1889, admiring the quaint picturesqueness of the town, reviving memories of Mozart and wondering at the modern troglodytes residing in furnished apartments cut cave like out of the solid rock in the hillside, I naturally, as a physician, hunted up the relics of Paracelsus. The monument and chapel described in the clipping are easily discovered. Of much more interest to me, however, was the home of this curious character. At one end of the Salzach bridge and within hailing distance of the home of Mozart, stands upon a projecting corner, facing a kind of little square, a plain, flat, unornamental four storied house, with a large portrait and explanatory plate in regard to Paracelsus on the front of it This was the last residence of the erratic, wandering, doubtful quack and genius Even his name is in doubt Some say it was Aureolus Philip Theophrastus Bombast de Hohenheim, others declare that it was only Philip Aureolus Theophrastus, while the Bombast part of it belonged to his father Paracelsus, which is an atrocious Greco Latin rendition of his patronymic, is good enough, I trust, for us Amidee Latour was fond of giving some such advice as this Remember always to appear to be doing some thing—especially when you are doing nothing Paracelsus understood this principle most effectively, and coming upon a time for which his peculiar talent was most fitted, he enjoyed a tremendous success He seems, in fact, to have been an intellectual giant, apparently doing everything, when in reality he was doing nothing Irascible, eccentric, fond of trickery, a liar, a charlatan and a quack, a man of undoubted genius with a few really valuable and practical ideas, a glutton, drunkard and common scold, a visionary, an absurd theorizer and a shiftless wanderer, he nevertheless impressed so forcibly the age in which he lived that, to the present day his renown is considerable Bombast was not a bad name for him He was born near Zurich some time time about 1493 He never attended any regular school, but was taught some Latin by his father, who was a physician Then he began to travel, or rather roam about, probably like Goldsmith, supporting himself doing odd jobs and amusing the people with his necromancy From the back of a cart he may already have begun doling out his sure cures to a gullible and voracious public He was somewhat of a chemist and, like many other learned fools of that foolish time, toiled night and day in search of the mythic philosopher's stone Think of the man at 33, boasting of having cured some thirteen princes, all given up, of course, as incurable by the doctors The world flocked to him and he waxed rich When a man lies why shouldn't he do it thoroughly? says the quack Thoroughness is always commendable The public, "Dear old Grandam" De Quincey calls it, fairly dotes upon a liar Well, the boasting of Paracelsus paid him munificently He was appointed professor of something in the University of Basel, and at once began creating a disturbance He said "reading never made a physician," and so he publicly burned the books of Galen "Countries are the leaves of nature's code of laws—patients his only books" About this time medicine was overrun and worm eaten with theorists, spiritualists, humoralists, materialists and all the rest of that ilk, and the turning of the world's gaze back upon nature was really one notable thing done by this grand charlatan—a thing almost good enough to atone for his outrageous falsehoods and cheats Even to day a Paracelsus might do some good work in certain quarters Finally a climax was reached in Basel Some grand dignitary whom, as usual, he proclaimed to have cured, refused to settle the little matter of the bill The dignitary controlled too many wires for the irascible professor, notwithstanding his mythic thirteen princes, and so one cheerless day the latter packed up his alembics, retorts, manuscripts, bones, tobacco pouch and whisky flask and resumed his peregrinations Like an unwelcome fowl in an old well regulated farmyard, he created an uproar wherever he went The "profession" of that day was synonymous with blind conservatism and obstinate unprogressiveness, and naturally it could not have been expected to fondle this noisy upstart who laughed at all its pet notions and burned its ponderous tomes At last he arrived at Salzburg and was given a most comfortable domicile by one of his admiring dupes He began quarreling as usual with the local profession, and ended by being "pitched out of the window of an inn by the doctor's servants and had his neck broken by the fall" Thus ended the strange career of this meddler in old established customs Both his life and his teachings were an incoherent medley He started medicine upon a new tack when he turned its eyes upon the doings of nature and away from the moth eaten volumes of useless libraries, but in so doing he intermingled much bosh, nonsense, fraud, miserable deception and falsehood He is dead, however, and may heaven rest his bones more peacefully there beside the blue Salzach river, than he did those of his poor patients whom he cajoled into swallowing his nauseous decoctions Like the worthy doctor to whom the immortal Gil Blas once served as assistant, he had one system for all his patients, and was a diligent bookkeeper, so to speak, for the next world

L Harrison Mettler, M D

Medical Expert Testimony

Dannemora, N Y, Oct 15, 1896

To the Editor —I have been very much interested in the papers and discussions published in our Journal relative to medical expert testimony As chairman of the committee appointed in February, 1895, by the Medical Society of the State of New York, to report upon the most feasible plan for improvement in methods of obtaining medical expert testimony, I presented to the committee two reports in January, 1896, the one which was adopted both by the committee and the society being that practically incorporated in the Bill presented by Dr Suiter, and already published in our Journal The one which the committee, while favoring the method, thought inadvisable to present to the Society fearing that it would meet with opposition, was as follows

> *Resolved*, That the Medical Society of the State of New York would recommend the enactment of a law by the legislature providing for the appointment of experts by the courts, and that only physicians of repute and holding a certificate of qualification as hereinafter defined in the particular branch of medical science to which the question calling for expert opinion relates shall be appointed
>
> The above named certificate of qualification to be issued by the Board of Regents, and duly filed in the County Clerk's office of the County in which the holder of such certificate is a resident, such certificate to be obtained in the following named manner
>
> The applicant for a certificate of expert qualification shall furnish reliable evidence to the State Board of Medical Examiners that he is legally qualified to practice in this State (New York), is of good standing in the medical profession, and has not had less than five years experience in the practice of the special branch in which he desires to stand as an expert, and shall also pass a satisfactory examination in the branch or branches in which he is to become an expert
>
> On the passing of such examination to the satisfaction of said Board, there shall be issued to him, in the same manner as a license to practice is now issued, a certificate of qualification to give expert testimony in the particular branch therein specified, and when properly filed all physicians holding such certificates shall be eligible for appointment by the courts, or may be called by defence as expert witnesses
>
> The testimony of any medical witness called by either plaintiff or defendant, not holding such certificate shall be restricted to evidence of fact

My own opinion is that could such a qualification test be set up, it would practically settle the question of obtaining reliable expert testimony, and eliminate most of the objectionable features of the present system It would seem that such a qualification could be demanded by the State without the infringement of any constitutional feature of the law, or an abridgement in any sense of the rights of the citizen or practitioner

There could be no question, it seems to me, as to the right of the State insisting upon such a qualification, no more than in its insistance upon a certificate of qualification to practice general medicine One of the objections raised by some of the committee to this feature was that physicians would not qualify, this, I think is erroneous, for any duly qualified practitioner who cared to become an expert could not object to this method of examination It is to be hoped, however, that many who, under our present system, might pose as experts, would not qualify as such I believe that qualification is the first step in the right direction, and that other remedial legislation would quickly and naturally follow

Very respectfully, J B Ransom, M D

Congress of Leprologists

New York, Oct 14, 1896

To the Editor —I have sent the following to the American Public Health Association Will you kindly publish in your next number?

A Congress of Leprologists and delegates of all civilized governments will in all probability, be convened next year for the suppression and prevention of leprosy It was at first proposed to hold this congress at Bergen, Norway, out of compliment to Hansen As the latter has renounced his claim, and left that question to be decided by those who will work for the scheme, and as there is among the present workers a division of opinion as to the comparative merits of London and Moscow, nothing can be said for the present, as to the place where the congress will meet Invitations will be issued, we hope, by one government to the other governments, to send each an official delegate These delegates will form a permanent international committee, whose business it will be to formulate laws suitable for each country The question of the suppression and prevention of leprosy, is of paramount importance to Canada, Mexico and the United States Lord Aberdeen, President Diaz and President Cleveland have already been appealed to, the first through Dr Smith, Medical Superintendent of the Leper Asylum of Tracadie, and Inspector of Leprosy for Canada, the second through Dr Carmona Y Valle, the President of the Second Pan American Medical Congress to meet in the City of Mexico, next November, and President Cleveland, through the Secretary of State

There are in Canada three centers of leprosy, a Scotch, Irish and French one in Nova Scotia and New Brunswick, a Chinese center in British Columbia and a possible Norwegian one about Winnepeg, from communication with our States, the Dakotas and Minnesota

In the United States there is danger from the Chinese invasion on the Pacific coast, and from the Norwegian center above mentioned, but the greatest peril consists in the possible contamination of our southern negro race from the Louisiana and West Indian lepers, and possible contamination from the Hawaiian islands

Mexico is exposed to Chinese and Japanese invasion and, moreover, the harbors of Mazatlan and Acapulco may receive inoculation from the 27,000 lepers of Colombia, South America, through mercantile intercourse

Queen Victoria, by her private secretary, Sir Arthur Bigge, has expressed sympathy when informed of this project and the matter has been referred to her responsible advisers

As this memorial did not reach the Advisory Council of the American Public Health Association in time to be brought before the recent meeting at Buffalo, I take the liberty to bring the matter under the eyes of the Association in an open letter, urging that the influence of the Association, which is known to be great, be brought to bear upon the governments of Canada, Mexico and the United States, so that we may obtain from each of them a delegate to the proposed Congress

Very Respectfully, Albert S Ashmead, M D

PUBLIC HEALTH

Consumption Among the Colored Population —A writer in the *Medical and Surgical Reporter* for October presents the statistics of eight of the principal cities of the South which prove that the proportion of deaths from consumption among the colored races as compared with the total mortality, is more than 50 per cent greater than that of the white population, while the death rate per thousand from this disease is nearly three times as great

The Bubonic Plague —The *Lancet* states that an outbreak of fever, attended by some of the features of what is alleged to be bubonic plague, has taken place at Bombay and has been attended by many deaths The occurrence has naturally excited a good deal of alarm among the native population, many of whom have left the city The troops of the British and native armies have been temporarily prohibited from entering the affected locality, and the government has appointed a committee to inquire into and report upon the subject Mr Dutt has arrived at Calcutta with the special object of aiding the committee in their investigation The outbreak is probably of the same nature as that which occurred lately in China and Hong Kong The *British Medical Journal* adds We hope no time will be lost in inviting Dr Yersin to practice his serum injections for the cure of the plague His success with it has been reported in this Journal

Tetanus Antitoxin in Brooklyn —The Department of Health of Brooklyn, N Y, has issued under date of October 8, a circular regarding tetanus antitoxin, as follows

"The health department is now prepared to furnish to physicians and hospitals antitoxic serum for the treatment of tetanus Each vial will contain 20 c c of the serum, but the dose will vary with the age of the patient, the severity of the attack and the time in the disease when the treatment is begun The remedy is administered in the same way as diphtheria antitoxin, by hypodermic injection, using a large syringe and carefully sterilizing the syringe and the skin before making the injection Some point on the anterior surface of the body is preferable for the injection Too much emphasis can not be placed on the vital importance of injecting the serum at the earliest possible moment, as every hour's delay decreases the chances of success and requires larger doses to overcome the amount of toxin produced and absorbed When the treatment is begun at the first appearance of tetanic symptoms, 20 c c should be injected at once, and 10 c c at intervals of six hours for the four following days If the treatment is not begun until three or four days after the onset of tetanic symptoms, 20 c c should be used at once, and repeated at short intervals according to the results The use of the serum does not preclude the employment of other methods of treatment by the use of antispasmodics The wound should be treated with some strong preparation of iodin, such as strong tincture, to destroy the toxin in it Carbolic acid and bichlorid of mercury are of little use for this purpose The exact value of this method of treatment has not been fully determined, and it is very desirable that full reports be sent to the department of each case and the result of the treatment"

Baths for Miners —On the European continent mining companies have, of late years, devoted much attention to providing facilities for the miners to perform their ablutions and to change their wet and dirty clothes, so as to enable them to return home refreshed in dry and warm clothes A very elaborate lavatory has been erected at the Hibernia mine, Gelsenkirchen The plant comprises shower baths for 1,600 miners and private bathrooms for the managers and overseer The success that has attended the use of lavatories in Westphalia led to the erection of two admirable establishments at the Dudweiler and Kreuzgraeben collieries, in the Saar coal field At Dudweiler the massively built house, which is in direct communication with the mouth of the adit, has an internal area of 108 by 61 feet The height of the roof is 16 feet Two high double walls divide the building into three sections, two of which serve for the married miners and the other for the young unmarried ones Light is furnished by forty five windows and three skylights, and, at night, by three arc lamps The floor is of cement, with a slope of 1 in 40 There are fifty-five shower baths, each in a cell, five of these being supplied with cold water and the others with water heated in summer to 86 degrees F, and in winter to 95 degrees F Each cell measures 4 feet 6 inches by 3 feet 3 inches, and is used by two miners at the same time The cold water cells are somewhat smaller and are arranged for one person only In the dressing rooms there are a number of forms, and for each man's clothes there is a hook and line running over pulleys at the ceiling The clothes hung up at the ceiling dry very rapidly Each hook is marked with the man's lamp number The building is heated by steam pipes For a bath, seven gallons of water are required Of the 1,900 miners employed in the mine 1,200 bathe regularly Seven hundred miners, however, live in barracks where ample washing accommodation is provided The lavatories have been in existence at Dudweiler and Kreuzgraeben collieries since 1891, and have answered their purpose admirably —*Health*, October 3

Detention Hospital for Lepers at Honolulu —Assistant Surgeon Ammen Farenholt, U S N , writes to the *Boston Medical and Surgical Journal*, September 3, the following account of the above institution "In December last, while at the Hawaiian Islands, on the U S S *Baltimore*, I visited Kalihi, the hospital of detention for lepers, three miles north of Honolulu The primary object of this institution is to afford shelter for the patients condemned as lepers and awaiting transportation to the Island of Molokai, the government leper settlement, and also to serve as a home for the suspects, those in whom the symptoms of the disease are not sufficiently well marked to admit of a positive diagnosis There are also 30 little patients here, the children of the lepers at Molokai, 23 are graduated from the institution, that is, having passed six or seven years under observation, and showing no signs of disease, they were allowed to go into the common walks of life Only one of these has become a leper, and he lived subsequently with an infected family in Honolulu In about one third of the cases both the father and mother were lepers All inmates are carefully watched and made to remain in the quarters assigned to patients in the same condition as themselves The hospital consists of five or six one storied whitewashed houses, arranged around a square filled with palm trees and beautiful beds of flowers Sisters of Charity from Syracuse, N Y , have charge of the hospital Every month the suspects brought in by government spies are examined by a board of five physicians, also appointed by the government The patients appear in the examining room, and are inspected by each medical officer in turn, who writes his verdict opposite the number of each case on the list before him The examination being over, the recorder reads off the numbers, and the members in turn give their opinion, the words *leper*, *non leper* or *suspect* being used Three votes out of the five are necessary for a decision The first are held until a sufficient number are waiting, and then they are transferred to Molokai, the second are allowed to return to their homes, and the third are retained for further observation An examination of suspects was being held at the time of my visit, to which I was kindly invited by the senior physician Facial paralysis, however slight, absorption of joints and later of the bones themselves and a reddish or a whitish macular eruption, are the most common primary lesions, as the disease is seen in Hawaii The population of the islands is about 38,000 (native Hawaiian) At Molokai there are 1,100 lepers, and it is said that only one in every four is detected Thus out of a population of 38,000, 4,000 are lepers, almost 12 per cent

The Daily Medical Inpsection of Schools in a Great City —We think it is not generally known, even among those who are considered to be sanitary adepts, that Boston has, after years of effort, the benefit of a genuinely systematic school inspection The August number of the *Archives of Pediatrics* shows how this innovation was secured by the Board of Health as a consequence of a very severe epidemic of diphtheria The general plan of operations, that has now been in force for a year, and that was, as we believe, devised or matured by Dr S H Durgin, is the following The city was divided into fifty districts, giving an average of about four school houses and fourteen hundred pupils to each district No difficulty was experienced in finding well qualified and discreet physicians who would undertake the duties prescribed The Board appointed one physician for each district, with a salary of $200 a year, plus the honor and satisfaction of serving in a good cause His duty is to make a visit to each master's school daily soon after the beginning of the morning session The master receives from each of the teachers in his district, early reports as to the appearance of symptoms of illness in any pupil in their charge These reports are given to the visiting physician, who at once examines the reported children and makes a record of his diagnosis and action in books furnished for this purpose, and kept in the custody of the master If the visiting physician finds the child too ill to remain in school, he advises the teacher to send the child home for the observation and care of its parents and family physician If the illness is from a contagious disease, the child is ordered home and the case reported to the Board of Health The medical inspectors never undertake to give professional treatment in any case They merely point out the need of professional treatment where the need exists The treatment itself must be received from the family physician or in the hospitals or in the dispensaries Incidental to this school inspection the same corps of medical men is also serving as agents of the Board of Health in the control of contagious diseases which are treated at home The Board of Health sends to each of the school inspectors, every morning, a full list of the cases of diphtheria and scarlet fever which have been reported during the previous twenty four hours Each medical officer selects the cases reported in his district, visits them to see if they are properly isolated at home, leaves a card for the attending physician, politely informing him of the official visit and reports his approval or disapproval of the isolation at once to the Board of Health for its action If the patient is properly isolated, the officer places a card on the door of the room to indicate the official designation of such room for the isolation of the patient If the case is not properly isolated and such isolation can not be commanded at home, he reports such facts to the Board of Health, and such patient is at once ordered to the hospital He makes another visit to the patient This school inspector and agent of the Board of Health is indirectly held responsible for the proper isolation of the patient at home, for causing the patient's removal to the hospital when necessary, and for the patient's release from isolation, in other words, the Board of Health is thus provided with trustworthy information upon which it can act for the best protection of the schools and the public against the spread of contagious diseases

NECROLOGY

A B Shaw, M D , St Louis, aged 49 years Dr Shaw died a martyr to duty Infected in the performance of duty years ago, his knowledge of the clinical course of that infection and its dreadful possibilities placed him often in a frame of mind to which the physical suffering which it entailed bore no proportion, and only those who were made the confidents of his mental agony can faintly realize what suffering there was for years hidden under the pleasant exterior of an apparently healthy body

Sir George Murray Humphry, aged 76 "Humphrey of Cambridge," one of the greatest medical figures of our time, revered and loved by generations of medical men and honored by individuals and scientific associations at home and abroad The new School of Medicine at Cambridge is his most lasting monument The *Lancet* mentions that he treated cases of tetanus by giving nourishment in all possible ways and tobacco smoking to excess Good port wine was his favorite internal remedy This treatment always soothed the patient, and the writer has seen three cases recover under it He commonly took his holidays abroad, and visited continental hospitals and museums, seldom failing ts bring back safely packed in a portmanteau some fragments of humanity which would enrich the Cambridge collection Indeed, he looked upon the museum as only second to the hospital in importance He often said that he turned every moment of his life to some account Even his severe illnesses were not without their utility, for his dangerous attacks of phlebitis furnished medical literature with one of the best monographs on the subject of venous thrombosis which has ever been written One of his aphorisms to his pupils was "Eyes first, fingers next, ears last"

SOCIETY NEWS

Second International Congress of Charities and the Protection of Children —Nine governments were officially represented at the Congress United States, Switzerland, France, Hungary, Portugal, Sweden, Spain, Luxemburg, and the Argentine Republic The resolutions adopted evidence the modern tendency to a more rational conception of the preponderant importance to the State of the correct physical and moral development of the child, and the responsibility of the community to the children of the poor and degraded They endorsed the formation of societies to supply medical care and assistance to mothers before and during confinement, with rest for four weeks afterward, and advice and assistance for mother and infant during the entire nursing period, in charge of local committees in every district with over twenty five infants to be thus protected, crèches near industrial establishments, under strict daily medical supervision, with guarding classes for children after school hours until the parents return from work, more judicious education of the young especially in morality, in view of the increasing juvenile criminality evidenced by statistics produced, complete separation of the young from adult criminals, and closer organization of all charities according to English and American methods The Congress also voted that the expense of assistance to foreigners should be reimbursed to the community by the State, and that the indigent should in every case be returned to their home by birth or naturalization

PRACTICAL NOTES

Pernicious Anemia Cured with Bone Marrow —A young soldier was brought to the hospital in pernicious anemia consecutive to an attack of dysentery He was so feeble that he could not rise, there was malleolar edema, ascites and dilatation of the right heart with systolic murmur at the apex Iron and arsenic produced no effect Blumenau cured him in two months and a half with the entire disappearance of the complications by giving him 90 grams a day of raw bone marrow, spread on bread or taken in soup, with no other medication —*Semaine Méd*, September 23

Sulphur Baths in Whooping Cough —Among the many treatments recommended for this disease, the *Journal de Méd de Paris*, September 20, describes Josset's prolonged baths, with 0 75 gr sulphureted potassa to the liter, the temperature at 97 degrees, and the duration of the bath from twenty five to forty five minutes, according to age, once a day, the head alone exposed above the water With this treatment all complications were avoided, the sulphur evidently acting on the special whooping cough bacillus, with a beneficial antiphlogistic effect on the bronchial mucosa and a revulsive action on the skin It is rarely necessary to administer more than fifteen baths as the cure is usually obtained long before this

Cause of Inefficacy of Sublimate Spray as a Disinfectant —Chavigny has found that the sublimate simply affects the outer surface of the microbes, producing a superficial layer of coagulated protoplasm, which temporarily destroys their virulence but readily washes off, when they recover all their former virulence Hydrosulphate of ammonia is one of the substances that promptly restores them to their previous activity Among other experiments, thin layers of tuberculous sputa exposed for a long while to direct sublimate spray, produced fatal tuberculosis every time when rabbits were inoculated with them —*Annales de l'Institut Pasteur*, June

Painless Treatment of Ophthalmia Neonatorum —Hjort of Christiana states that the same results obtained with the classic treatment of this affection can be secured with much less trouble and inconvenience, by first dropping in oxygenated water at 1 or 1 5 per cent, which causes the pus to effervesce. The eye is then washed out with 2 per cent boricated water, working the lids slightly until the pus has all been cleaned out, when the solution of nitrate of silver at 1 per cent is gradually instilled This method does not require the reverting of the eyelids, but it should be repeated four times a day at first. It can be safely intrusted to a well trained uurse —*Semaine Médicale*, September 23

On the Misuse of the Pessaries —Dr A J C Skene *Brooklyn Medical Journal*, September, participated in a discussion of Dr John Byrne's paper on the needs of minor gynecology, before the Gynecological Society of the city above named He generally confirmed the opinion of Dr Byrne that the misuse of pessaries, in the treatment of uterine retroversion, was every day tending to produce conditions, remediable in themselves, that are absolutely incurable, that too many of these implements as sold in the instrument makers' stores were viciously devised to produce an atrophy of the tissues impinged upon and thereby converting simple retro displacements into incurable flexions Dr Skene's remarks were in part as follows: "With reference to the use of the pessaries, and that is only one thing in which we are apt to go astray in minor gynecology, I have certainly had some experience, though limited no doubt, compared to that of Dr Byrne There was a time when I introduced very many pessaries, but now I think I divide my time about evenly between removing those that have been introduced and using others that give relief It is an unfortunate thing that very few have had practice and patience enough to master the mechanisms of displacements and the mechanic appliances for their relief I have no doubt there are hundreds of men who do laparotomy and all surgical operations in the domain of gynecology who could not fit a pessary to correct a displacement any more than they could make boots to fit themselves"

Tubercular Meningitis Ending in Recovery —Dr Jenssen in the *Deutsche medicinische Wochenschrift* reports a case of the above description The writer adverts to the rarity of recovery in this disease In a few cases the diagnosis has been established by finding evidence of a past tuberculous meningitis, the patient having died of some other cause In Freyhan's case of recovery, tubercle bacilli were found in the fluid drawn off by spinal puncture The author then records the following case A man, aged 19, was admitted in May, 1892, with headache, stupor, vomiting and constipation The temperature was raised and at one time the pulse only numbered forty-two per minute Later there was ocular paralysis and retraction of the head Some fourteen days after admission the patient began to improve and he was discharged well a month afterward Three years later he was again admitted into the hospital with early phthisis The disease ran a rapid course and he died four months later At the necropsy a yellow mass, composed of minute tubercles, and measuring four centimeters long and two centimeters wide, was found running along each side of the longitudinal fissure The pia mater was of a milk white color in several places over the convexity of the brain, there minute tubercles were also seen The first named tubercles consisted of detritus, fat and a few cells, but no fibrous tissue, and the last named of fibrous tissue and a few cells. In no instance were tubercle bacilli found At the base of the brain the same white spots containing tubercles were seen about the chiasma and Sylvanian fissures In these white areas the pia mater and arachnoid were adherent to the underlying brain tissue As regard the treatment of this attack of tuberculous meningitis, the head was shaved and iodid of potassium was given in large doses, 8 g were at first administered in the day, but this quantity was rapidly increased The patient took as much as 950 g during the illness There was a slight coryza, but no other unpleasant symptom All the secretions and excretions gave a marked iodin reaction The author thinks that the iodid had undoubtedly a favorable effect on the disease This treatment is not new, but these large doses of iodid have not within the author's knowledge been used before

New Operation for Luxation of the Tendons —Luxation of the tendons does not occur frequently, but is a source of great annoyance when it does happen An article in the *Revue de Chirurgie* for September reviews the cases on record and the various methods of treatment, concluding with a new operation performed by Kousmine of Kazan The patient had dislocated the tendons in an accidental fall two years previously, when his foot had slipped out to one side Bandaging had proved ineffectual, and in spite of every precaution in stepping, the peroneal tendons sprung out of their normal position, especially in supination and flexion, producing great pain and causing the foot to slip, until walking was practically impossible A half moon incision was made to the bone behind and below the external malleolus, and a trapeze shaped space on the periosteum cut around, the base of the trapeze corresponding to the lower edge of the malleolus, after which the enclosed small, flat piece of bone was cut out with the scissors and raised perpendicularly to the malleolus A couple of nickel nails were inserted to hold this little piece of bone up like a trap door, and keep the tendons in place A plaster cast was then applied The pain was trifling and soon passed away There was no fever In seventeen days the cast was changed, the nails withdrawn, and the tendons found in their normal position, with a considerable elevation thrown up on the outside of the malleolus. Another plaster cast was applied and the patient left the hospital with advice as to slight massage and exercise after removing the cast in twenty eight days The results of the operation have proved curative and brilliant The patient is entirely relieved of his functional troubles The neoformation of the bone answers its purpose perfectly, while the traumatism was insignificant in the simple operation, as neither the tendons nor the aponeuroses were wounded

MISCELLANY

Ammonia in Alcoholism —Dr Baratier recommends, in *El Siglo Medico*, the addition of ammonia to wine or liquor in order to produce a distaste for alcoholic beverages After a few doses the disgust to the mixture becomes so intense that even the sight or smell of wine is unpleasant —*St Louis Med Journal*, October

The Significance of the Diazo Reaction in Phthisis —Beck, from investigations carried out in the Institute for Infectious Diseases at Berlin, has come to the conclusion that the appearance of the diazo reaction in the urine of patients suffering from phthisis makes the prognosis unfavorable, while its long continuance forebodes an early death —*Boston Med and Surg Journal*

Bahia's Participation in the Pan American Medical Congress not Possible —The *Gazetta Medica da Bahia*, Brazil, states that the profession at Bahia does not expect to take any part in the Pan American Congress, either personally or by scientific contributions The circulars in regard to the Congress have only just been received at Bahia, but this delay is not the cause of the abstention, but the fact that the same date has been appointed for the first medico surgical congress to meet in that city

Trained Nurses in California —The *Medical Record* states that many trained nurses from Philadelphia and Baltimore have recently been induced to go out to San Diego and other places in Southern California on the representation that they could find employment there that would pay them $20 to $25 a week On arriving there, however, they have found that there was no work for them, and that, even if there were, they could not obtain any such remuneration for their services, and they have in many cases had to send to their friends in the East for money to enable them to return home

Provision for Baltimore Indigent Lying in Women —Recognizing as is stated, that the Maryland Lying in Hospital, of Baltimore, a body corporate, is well and firmly established in said city, and particularly well equipped for the treatment of lying in women, and that it is desirable that the benefits and advantages of such hospital should be extended to the indigent lying in women of the State of Maryland, so that skilled and humane treatment be afforded them, the General Assembly of the State enacted, in chapter 148 of the Laws of 1896, that the sum of three thousand per annum be appropriated for each of the years 1896 and 1897 for the maintenance of free treatment for indigent lying in women in said hospital

Chairs for Maryland Salesladies —A Maryland statute of 1896 provides that all proprietors or owners of any retail, jobbing or wholesale dry goods store, notions, millinery or any other business where any female help are employed for the purpose of serving the public in the capacity of clerks or salesladies, shall provide a chair or stool for each one of such female help or clerks, in order that during such period as they are not actively engaged in making sales or taking stock they may have an opportunity to rest The penalty for the first offense is a fine of from $10 to $100, and in the event the owner or proprietor shall continue to disobey, he shall be subjected to a fine at the rate of one dollar a day, daily, for every chair he fails to furnish his said employes

Alvarenga Prize of the College of Physicians of Philadelphia —The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about $180, will be made on July 14, 1897, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered Essays intended for competition may be upon any subject in medicine, but can not have been published, and must be received by the secretary of the college on or before May 1, 1897 Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College other essays will be returned upon application within three months after the award The Alvarenga Prize for 1896 was not awarded THOMAS R NEILSON, Secretary

Illinois State Conference of Charities and Corrections —It has been found necessary to change the date of the proposed State Conference of Charities and Corrections The conference will take place on Thursday and Friday, Nov 12 and 13, 1896, at the Capitol in Springfield, and not **November** 18 and 19, as pre viously announced Among those who it is hoped will take part in the program are H H Hart, secretary Minnesota State Board of Charities Ernest Bicknell, secretary Indiana State Board of Charities, Bishop Spalding, Dr Julia Holmes Smith, Miss Jane Addams, Judge Carter of Chicago and others Complete program will be published later Classes for the State Schools for Blind and for the Deaf and Dumb will give exhibitions Governor and Mrs Altgeld will receive the Conference at the Executive Mansion Excursion rates of a fare and a third will be made by the railroads, and special rates will be obtained at the hotels and boarding houses in Springfield For any information or services desired, please address Geo F Miner, Secretary State Board of Charities, Springfield

Cause and Prevention of Glaucoma —The etiology of glaucoma is still disputed, but Schoen of Leipsic, the new professor of ophthalmology, asserts in an article in the *Wien klin Rundsch* , Nos 26 to 31, that no one need lose his sight from this cause, unless he chooses It can always be prevented if the eyes are seen in time by an expert and his warnings heeded, as the invariable cause is excessive strain in the effort of accommodation As the number of the efforts increase with age, the strain increases and glaucoma is the result The particulars of the last 140 cases he has treated are 48 per cent hypermetropic, not one had possessed a distance lens Astigmatism was present in 33 per cent, in none had the astigmatism been corrected In 20 per cent there were no glasses, or they had been utterly inadequate Nearly twice as many cases of glaucoma occur among women as in men, the former shrinking from wearing glasses until too late What may be a trifling effort for the eyes at first, becomes in the course of years an exhausting strain, and while this strain of over exertion in the efforts of accommodation produces anatomic changes which lead directly to glaucoma in time, yet any constitutional morbid tendency, any weakening or depressing cause, violent coughing, night watching, etc , may hasten its appearance

New Dental Law for Maryland —Chapter 378 of the Maryland laws of 1896, which was approved April 4, 1896, repeals Article 32 of the Code of Public General Laws, entitled "Dentistry," and reenacts the article with many changes in it The new law makes it unlawful for any person to practice dentistry in the State unless he shall have obtained a certificate therefor It then provides that there shall be a State board of dental examiners, which shall consist of six practicing dentists of recognized ability and honor, who have held regular dental diplomas for five years They are to be appointed by the governor out of a list proposed by the Maryland State Dental Association Six years is the regular term of office Any member who shall be absent from two successive regular board meetings shall cease to be a member of it The regular meetings are to be held in May and November of every year, with special meetings as required Any person 21 years of age, who has graduated at and holds a diploma from a university or college authorized to grant diplomas in dental surgery by the laws of any one of the United States, may be examined by said board with reference to qualifications, and upon passing an examination satisfactory to said board, his or her name, residence or place of business shall be registered and a certificate shall be issued to such person Any graduate of a regular college of dentistry may, at the discretion of the examining board, be registered without being subjected to an examination A temporary certificate for a specified time may be issued by the officers of the board to any applicant holding a regular dental diploma duly registered by a board of dental examiners created by the laws of any one of the United States, but no such certificate shall be issued for any longer time than until the next regular meeting of the board The fee for this temporary certificate shall be $5 Transcripts from the book of registration, certified by the officer who has the same in keeping, with the seal of the board, shall be evidence in any court of the State Every person shall be said to be practicing dentistry, within the meaning of this act, who shall for a fee, salary or other compensation, paid either to himself or to some one else for services rendered, perform operations or parts of operations of any kind pertaining to the mouth, treat diseases or lesions of the human teeth or jaws, or correct malpositions thereof The penalty for a violation of these provisions is a fine of not less than $50 nor more than $300, or confinement in jail not more than six months But nothing in this article shall be so construed as to interfere with the rights and privileges of resident physicians and surgeons or with persons holding certificates duly issued to them prior to the passage of this act, and dental students operating under the immediate supervisions of their instructors in dental infirmaries or dental schools chartered by the general assembly of Maryland Money received for examination and registration, the fee therefor being $10, shall be used toward paying the expenses of the board All fines received are to be paid into the common school fund of the city or county in which conviction takes place

Recent Additions to the Army Medical Museum —One of our military papers, the *Army and Navy Journal*, in its issue of October 17, has an article entitled "New Surgical Appliances," which gives the results of an investigation into the additions made to the Army Medical Museum during the past year and particularly with regard to those that relate to the transportation of wounded The article displays an excellent knowledge of the subject It is as follows

> The last Congress appropriated $5 000 for use of the Army Medical Museum, at Washington A portion of this sum has been expended in the purchase of field appliances used by foreign countries for exhibition in the museum side by side with the improved equipments of the hospital corps of the United States Army Many of the new foreign acquisitions have been received and a place has been found for their permanent display The countries thus far represented are Prussia, Switzerland, England, France, Austria Hungary, Norway, Spain and Japan, and the collection includes litters on wheels and for hand bearers, knapsacks, surgical pouches, chests and instruments, and articles for the use of the sanitary and culinary departments of the hospital corps The litters and general appliances of the European armies, excepting possibly England, are characterized by exceeding bulkiness and weight, though admirable in many other respects The Prussian and Spanish mattresses, in particular, are remarkable for comfort and hygienic qualities The Norwegian litter is an unwieldy affair, and is very uncomfortable The Japanese have a light and easy bamboo bed on wheels, with carriage top, resembling the jinriksha, which has only one undesirable quality—its fragility, the bamboo offering little resistance to great weight and shocks The Japanese leather bound medical chests and French pouches and panniers are admirable for completeness of outfit and economy of space Some tiny surgical pouches of the Austrian army are marvels in this respect Other notable articles are a Spanish seat for carrying wounded men, and the English and French litter carriages and beds
>
> The recent additions to the collection of articles used in the United States service are important and compare favorably with the best similar appliances in use abroad Our new litter is much lighter than any other, except the Japanese, is much more durable than that, and in every respect is considered admirably adapted to the use of our arms The new regulation adjustable sling, which remains on the bearers, is a great improvement over the old method of bearing the litter, both as regards the comfort of the wounded person and of the bearers The Quartermaster's Department has adopted this litter and each company is to receive two litters The new drill regulations for the Hospital Corps, recently issued, incorporates a revision of the manual of the litter adapted to the new improvements Some other changes have been made in the regulations such as the abolition of side arms for Hospital Corps men, and changes in the manner of packing and transporting clothing The new operating table for field hospital work, which finds a place in the collection, seems as nearly perfect as science and skill can make it The latest improvement is an arrangement of cranks by which a patient may be lifted or lowered, or his position changed without the interposition of the attendant's hands

Of late acquisitions the telephonic bullet probe and forceps, made by Tiemann & Co , New York, is a curious mechanism and would be of greater value if the practice of probing were more generally pursued The instrument consists of a band of metal to be placed around the head of the surgeon, a bell being affixed near the ear From the bell extends a wire connecting with the probe, both being in communication with an electric battery The principle is that the bell shall ring when the probe strikes the bullet It is customary now, however, and has been for some years, to allow gunshot wounds to heal with out suppuration, and the probe is not employed unless the ball is pressing upon some vital center, or there appear symptoms of poisoning If a wound be made by new and clean ammunition there is little or no danger of poisoning If a cartridge has been carried about a long time in the pocket or other exposed place, it is apt to accumulate foreign matter of a deleterious nature

Other recent additions to the museum are some English water filters and sterilizers, a litter with disjointing parts and detachable slings, adopted by the Massachusetts Volunteer Militia, and cabinet field desks of the United States Army, which may be folded in the form of chests for transportation

Souvenir Volume of the Centennial of the Faculte de Medecine — This large quarto and the accompanying atlas of 130 portraits is a historical sketch of the institution and what it has accomplished, compiled by a special committee and published at the expense of several of the medical publishers of Paris It is a "publication de grand luxe," as evidenced by the price, 100 francs, or about $20

Hospitals

Typographical Union Hospital —At the sixth day of the convention of the International Typographical Union the subject of providing for the erection of a hospital in connection with the Childs Drexel Home for Old Printers, which is located in Colorada Springs, came up for discussion Fifteen thousand dollars was provided by the International Union for the building of the hospital, which amount is to be contributed by the printers all over the land as a popular subscription The amount is expected to be raised by Christmas ——The soliciting committee of the Augusta, Me , city hospital has reported subscriptions to the amount of $5 500 This amount assures the purchase of a hospital site this fall ——The annual meeting of the Board of Directors of the Kensington Hospital, Philadelphia, for Women was held October 12 During the last year 287 patients have been treated in the wards, and 274 in the dispensary, making an increase of 127 over the previous year Four hundred and sixty two operations have been performed and the cost of maintenance for the year was $10,723 An appeal is made for additional funds to erect a new building and also to provide for the care of an additional number of free patients ——The new building erected as an annex to the Flower Hospital of New York was opened for the reception of patients October 2 ——The corner stone of the St John's new hospital at Long Island City, L I , will be laid November 1 ——The executors of the estate of the late Very Rev Fr McCabe, who was pastor of St Charles church, and vicar general of the Providence diocese, who died several years ago, have intimated that $500 will be shortly forthcoming from this estate with which to establish a free bed in the Woonsocket, R I , hospital This is in fulfillment of the intention of the deceased rector

Washington

Located by the X Rays —Dr John Van Renssalaer of the surgical staff of the Garfield Hospital successfully located a bullet by the X rays and removed it on the 8th inst The bullet was located deep and posterior to the hip joint and had made the woman practically an invalid

First Medical Examination for Practice in the District —The first examination of physicians for license under the new medical law, was held on the 8th to 11th inst , in the rooms of the Civil Service Commission The first three days were devoted to written, and the last day to oral examination

Changes at the Garfield Hospital —Dr A L Stavely, who has been the surgeon in chief and superintendent of Garfield Hospital for three years past, severed his official connection with that institution on the 1st inst , in order to resume private practice Dr Stavely tendered his resignation several weeks ago, and it was accepted in a very complimentary letter from the board of directors Dr Stavely for three years was assistant to Dr Howard Kelly of Johns Hopkins Hospital, Baltimore Dr M D'Arcy Magee will act temporarily at Garfield Hospital in place of Dr Stavely, while Dr J Milton Heller is to serve as senior resident physician

Changes at the Central Dispensary and Emergency Hospital —The following is the medical staff of the hospital and the medical assignments for the ensuing year Health Officer, Dr W C Woodward, Sanitary Officer, John A Frank Consulting staff Drs N S Lincoln, J Ford Thompson, W W Johnston, J Taber Johnson and G L Magruder Diseases and injuries of the eye and ear Dr Swan M Burnett Diseases and injuries of the throat and chest Dr T Morris Murray Diseases and injuries of children and orthopedics Dr William H Hawkes Diseases peculiar to women and acute venereal of women Dr H L E Johnson Surgical diseases Dr James Kerr General diseases, skin diseases, and venereal of men Dr G B Harrison Mental and nervous diseases Dr E L Tompkins The emergency department has been placed back in its original position under the executive officer, with assistants in Drs W P Carr, A A Snyder and John Van Rensselaer A total of $15,000 is asked for by the hospital authorities to run the hospital next year, and the suggestion made last year as a means of liquidating their present indebtedness is repeated The indebtedness of the hospital is $20,000, on which an annual interest is paid A total of 10,433 new cases were treated in the dispensary during the year, and in the same period 2,828 new cases were cared for in the emergency department, with 1,925 redressings The number received into the wards of the hospital for treatment and care was 189 , deaths 49 , autopsies 28 , ambulance calls, 421 , surgical operations 1,443

Applicants for Police Surgeon —Twenty five young medical men recently took the examination for the position of Police Surgeon President Kleinschmidt, of the Board of Medical Supervisors, conducted the examination

Entitled to Licenses —Physicians who were registered at the health office at the time of the passage of the recently enacted medical practice act are entitled to licenses upon application to the board of medical supervisors Blank forms for application can be obtained at the health office upon request in person or by letter

Medical Association Elects New Members —At the stated meeting of the Medical Association, recently held, the following new members were elected to active membership Drs Chas L Allen, Hugh C Duffey, Robt H Graham, E M Hasbrouck, H Warfield Howell, G T Howland, Francis Leiben, R F Mason, Jr , W L Masterson, E D Perkins, C V Petteys, F M Phillips, M S Patten, A M Ray, E M Schaeffer and Elmer Satheron

Medical Society Elects New Members —At the recent meeting of the society the following new members were elected Drs Walter A Wells, Edwin Gladmon, John H Metzerott, Abbie C Tyler, Phoebe R Norris, Thomas B Crittenden, W R Maddox, Susan J Squire, A L Stavely, Walter D Cannon, Adeline E Portman, W A Caldwell At the regular weekly meeting of the society, held on the 14th inst , Dr J C McGuire read a paper entitled "Electrolysis in the Treatment of Diseases of the Skin," and Dr L Eliot read a paper on the subject of ' Suture Clamp Operation for Hemorrhoids "

Washington Obstetrical and Gynecological Society — The [illegible] meeting of the society [illegible] 16th inst and [illegible] by the [illegible] was the [illegible] d committees for the ensuing year, and resulted in the re election of all the former officers President, Dr G B Harrison, Vice presidents, Drs S S Adams and G N Acker, Treasurer, Dr John Van Renssalaer, Recording Secretary, Dr G W Cook, Corresponding Secretary, W S Bowen

Auxiliary Committee on Transportation for the Second Pan American Medical Congress —The International Executive Committee has appointed the following physicians as an auxiliary committee on transportation for the Congress Drs J B Murphy, Chicago, Robt Sattler, Cincinnati, A Walter Smith, Herkimer, N Y , J B Roberts and W B Atkinson, Philadelphia, A W Calhoun, Atlanta, Ga , H C Eccles, Charlotte, N C , I N Love, St Louis, Mo , Herman Mynter, Buffalo, N Y , Robt T Morris, New York City, R Matas, New Orleans, La , S Eliot, Washington, D C , Hugh Taylor and G Ben Johnston, Richmond, Va , A Morse, Elsora, Iowa, Walter H White, Boston, Hugh Hamilton, Harrisburg and Bedford Brown, Alexandria, Va

Pan American Medical Congress Transportation Arrangements —Dr H L E Johnson, to whom the arrangements for transportation were assigned by the International Executive Committee, has made his report which is now printing and will be circulated among the profession during the week He has arranged for one fare rate throughout Mexico and the United States except in the New England States and portions of Eastern territory By single trip from New York city to Mexico and return direct the entire cost will be Fare, $78 50, Pullman births round trip, $46, meals round trip, $32, total cost, $156 50 Living in Mexico $2 50 per day extra, intermediate points at proportional rates A special train has been arranged for through the American Tourist Association with Wm Campbell, manager, to leave Cincinnati on Tuesday, November 10, 9 A M , via St Louis and Eagle Pass, and make a twenty one day tour from there through Mexico and return for $189, from Chicago and return, $190, from St Louis and return, $183 55 This will include railroad fares, double births, meals in cars and hotels in Mexico and carriage hire and streetcar ride, steamer on Panuco River from Tampico and all necessary expenses of the trip The Baltimore and Ohio scenic route has been selected to carry the delegates from the North and East to meet the special train at Cincinnati, 300 persons have already signified their intention to make the trip An ocean route from New York by Ward lines has been arranged for, the total cost of which will be, including meals and stateroom, $78 Ten days required each way to make this trip The individual trip by rail will take six days each way

Tribute to Dr Toner —The annual report of the Government Hospital for the Insane, makes the following allusion to the late Dr Toner, President of the Board of Visitors, and includes the resolutions adopted at the time of his death "It is gratifying to us to know of such good work done in the Toner building How he who gave his name to that building would have rejoiced in it all, and yet the name comes to us now only to remind us of our loss Dr Joseph M Toner has been taken from us He had been so long an active member of the board, for so many years its president, that something seems wanting from this annual report without his genial presence and wise counsel in its preparation There was nothing about St Elizabeth or its inmates in which he did not feel a lively interest, and as the years went on, with his name on our hospital buildings and his pleasant face looking in so often upon us, to name Dr Toner was to suggest St Elizabeth It leaves a void that will not soon be filled He died suddenly at Cresson, where he had gone for a brief summer rest He had gone in the full expectation of returning long before our annual meeting, and looking forward to it as to a coming home He has found the home that his life had so well deserved, and contemplating the nobility of that life we find an inspiration to go on with the work here which lay so near to his heart "

Dental Inspectors for Schools —We notice in the *Medical Mirror* that the Ontario Board of Health recently adopted the following resolution "That dental inspectors be appointed by local boards of school trustees to periodically visit schools and examine children's teeth, and that a dental hospital be started in Toronto for the benefit of poor children, and these recommendations be urged upon the attention of the Minister of Education "

THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Oct 2 to Oct 16 1896

Major Henry McElderry, Surgeon, is relieved from duty at Ft Robinson Neb , on expiration of his present leave of absence and is ordered to Ft Leavenworth, Kan , for duty at that station, to relieve Major Calvin DeWitt Surgeon U S A

Capt William P Kendall, Asst Surgeon U S A is relieved from duty at Ft Sam Houston, Texas and ordered to Ft Brown Texas for duty at that post to relieve Major Peter J A Cleary Surgeon U S A

Major Calvin DeWitt Surgeon, upon being relieved from duty at Ft Leavenworth Kan is ordered to Ft Monroe Va for duty at that station to relieve Major Edward B Moseley, Surgeon U S A

Capt Benjamin Munday, Asst Surgeon, will in addition to his present duties at Ft Wayne, Mich , examine recruits enlisted at Detroit, Mich and will furnish medical attendance at the recruiting station in that city

Capt William B Davis, Asst Surgeon, now Major and Surgeon, will be relieved from duty as attending surgeon and examiner of recruits in New York city, upon the expiration of the leave of absence granted him in S O 23 A G O Sept 30, 1896 instead of the conclusion of his examination for promotion as heretofore ordered by Par 4 S O 44 A G O Sept 4 1896 By direction of the Secretary of War

First Lieut George D DeShon, Asst Surgeon is granted leave of absence for four months to take effect after he shall have reported for duty at Washington Bks , D C

Col Charles H Alden, Asst Surgeon General and Major Calvin De Witt, Surgeon are detailed as delegates to represent the Medical Department of the Army at the Second Pan American Medical Congress to be held in the City of Mexico, Nov 16 to 19 1896 By direction of the Secretary of War

Capt N S Jarvis Asst Surgeon U S A , granted six months' leave of absence with permission to go beyond sea

Capt Jefferson D Poindexter Asst Surgeon will be relieved from duty at Ft Riley, Kan and will report in person to the commanding officer, Willets Point, N Y , for duty at that post

Major Peter J A Cleary Surgeon upon being relieved from duty at Ft Brown, Texas by Capt Kendall Asst Surgeon, will report in person to the commanding General, Dept of Texas, for duty as chief surgeon of that Department

PROMOTIONS

Lieut Col C R Greenleaf, Deputy Surgeon General, to be Asst Surgeon General, with rank of Colonel, Oct 10 1896, vice Town retired

Major William H Gardner Surgeon, to be Deputy Surgeon General with rank of Lieut Colonel, vice Greenleaf promoted, to date Oct 10 1896

Capt William W Gray, Asst Surgeon, to be Surgeon, with rank of Major Oct 10 1896, vice Gardner, promoted

Capt William B Davis Asst Surgeon, to be Surgeon with the rank of Major, Aug 11, 1896, vice Worthington, deceased

RETIREMENT

Col Francis L Town, Asst Surgeon General is at his own request having served over thirty years, retired from active service this date, Oct 10, 1896

Change of Address

Blech, Gustav, from Detroit, Mich to 728 17th St N W , Washington, D C
Davis Geo E from Salviso to Lawrenceburg Ky
Hamilton, John B , from Rand McNally Building to 100 State St Chicago Ill
De Hart, J N , from Round Lake to 137 Keap St , Brooklyn N Y
Goelet A H from 350 W 57th-St to 108 W 73d St , New York N Y
Gottschalk F B from cor Clark St and Chicago Av to 2030 N Halsted St Chicago, Ill
Hall Lemuel T , from 910 Vandeventer Av to 4240 West Belle Place, St Louis, Mo
Isbester R T , from Chicago, Ill to Salem, Iowa
King, Chas Lee, from Lamanda Park to Pasadena, Cal

LETTERS RECEIVED

Adamson F W , Milwaukee, Wis , American Journal Publishing Co St Louis Mo
Battle & Co St Louis, Mo Beard, R O , Minneapolis, Minn , Bonney, S G , Denver, Colo Bracken H M , Minneapolis, Minn
Dewey, Richard Wauwatosa, Wis
Holland J M , Philadelphia Pa , Hummel, A L Adv Agency New York N Y
Johnson, J W , Boston Mass
Lincoln M H , Philadelphia, Pa
Macey, Fred Co , Grand Rapids, Mich , Marks, A A New York, N Y Merrick M B Passaic N J Moore W S Detroit Mich Murphy, T C Manitou Ill McNew H L , Honey Grove, Texas
Open Court Pub Co Chicago Ill
Pasteur Vaccine Co , Chicago, Ill Peek, J H , Hampton Va
Ransom, J B Dannemora N Y Robinson R E , Frederika Iowa
Schering & Glatz, New York N Y Stearns, F & Co , Boston, Mass Sternberg, Geo M , Washington D C
Taylor, B D , Ft McPherson, Ga , Tuley, Henry E , Louisville, Ky

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ORIGINAL ARTICLES

ON THE TREATMENT OF FRACTURED SHAFTS OF BONE IN CHILDREN, SIMPLE, COMPLICATED AND COMPOUND

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga May 5-8 1896

BY THOMAS H MANLEY, M D
PROFESSOR OF SURGERY, NEW YORK CLINICAL SCHOOL OF MEDICINE NEW YORK

Fracture is, perhaps, the most common type of severe trauma incident to childhood, especially in the male sex

When the shafts of bones are involved, although union is more rapid than in the adult and repair is more complete, there are several special features of treatment of them, to be observed in the youth, if we would avoid possible dangers to the integrity of the damaged limb and secure the fullest degree of strength and function in it after recovery

Anatomic Considerations —It should be always remembered, that the bones of a child are immature structures, neither the epiphyses nor the apophyses have yet fused with the shaft by osseous union, through the absence of full calcification, the bone possesses unusual resiliency and elasticity Vascular and cartilaginous elements predominate in the osseous structures in infancy, both progressively diminishing as age advances The cancellous heads are the centers of great vascularity, the periosteum thick and is everywhere ramified by vessels which course through it and penetrate the cortex through Howship's lacunæ The medullary elements share in the activity of the nutritive forces, as is demonstrated by the bright crimson color of the bone marrow and its great proneness to bleed freely, when lacerated Nutrition and growth of the bone shafts at this epoch of life are maintained, by *periosteal* and *endosteal* sources, *i e*, from the circumference and ends Layer after layer of the myeloplaxes bud from the true bone roots, the cancellous heads, and are deposited in consecutive layers, on either end, preliminary to fusion and the formation of Haversian systems, while simultaneously from the circumference, the osteo-blastic layer of periosteum is steadily superadding concentric lamellæ, of neoblastic bone corpuscles

The overlying soft parts are in a high state of nutritive activity, neither the effect of time, nor occupation, nor the degenerative consequences of various local or constitutional disease have made their impress on the structures of the limbs, arterial sclerosis, venous varix, or territorial obliteration of the capillaries have not yet appeared

Although, in the young, growing limb the sanguinous supply is abundant, it is important to note that the volume of force of the blood-current in the great blood-trunks is not as great as in the adult, and accordingly in a corresponding degree, it is unable to resist the effects of pressure or tension

Etiology of Fracture in Childhood and Youth —Traumatic disorganization of bone in children more often results from direct, than indirect force, from the latter, we will more often find, epiphyseal separation or dislocation resulting Colles' or Pott's fracture in them, is rarely, if ever, witnessed

It has seemed that the shock attending the average simple fracture of a limb, was less in children than in adults Muscular action as a conservative factor, plays an unimportant *role* in these fractures As a rule force must be directly applied, or at all events in close proximity to where the bone sunders This will explain why we so rarely see the shafts or apophyses shattered, after sudden tortion or twists contiguous to a joint

I am not familiar with any constitutional disease in a child which predisposes to fracture There is no doubt, but in the cachectic, rickety, syphilitic, or badly fed the bones are more vulnerable and prone to give way to violence, but then, the effects of malnutrition are widespread, involving equally the soft parts and organs, as well as the osseous structures

It can not be said, therefore, that as a rule, there are any predisposing causes of fracture during the stage of growth and development, in this respect these fractures being widely at variance with the etiology of the same lesion in the adult That there is a strongly marked predisposition to fracture in some adult individuals no one can deny who has treated a large number of fractured shafts, but in my own experience with this traumatism in the child, I have never been able to find evidence to support the probability of predisposition

It seems, however, that with those who have had a large experience in the treatment of broken bones in modern children's hospitals, a belief prevails, that there are dyscrasia tending to fracture in the young Thus, Power speaks of osteopsathyrosis, or fragilitas ossium, rickets and even an inherited tendency, leading to fracture in young children (Surgical Diseases of Children, D Power, p 160) It is well to remember in this connection, that most hospitals for children are filled with unhappy waifs, illegitimate offspring and poor poverty-stricken orphans, with feeble constitutions forming a class quite distinct from those more fortunately situated in the outside world, and not to be readily contrasted, in their morbid tendencies, with average fairly fed children, at home

Morbid Anatomy —In the child the nature and extent of tissue disorganization in fracture are not identical with the adult As the degree of force necessary to break or crack the bone shaft is less, we will not [illegible] equently [illegible] sim [illegible] ration of conti [illegible] , as [illegible] cul [illegible] sse- ous [illegible] i [illegible] ic organic material there is rarely shattering unless, great crushing force acts over a limited area, the bone being less brittle, the double bladed spurs seen in the oblique fracture of an adult, are not encountered as the rent through the shaft is generally in a transverse direction. The periosteum being thick, and the muscular power comparatively feeble, marked displacement, over-riding of the fragments or surface deformity are not such prominent characteristics as in the matured man.

Joint implication constitutes one of their most serious features. Fracture through any part invested by the perichondrium on opening through the synovial membrane, or involving the "growing line," the epiphyseal bridge, in spite of what particular line of treatment is followed, may result in marked limitation of joint action, articular deformity, or permanent arrest of growth of the limb. It is probable that in all severe fractures, growth in the limb is in the abeyance, until after repair is complete.

In many cases of femoral fracture, shortening has been noticed by me, when perfect apposition of the fragments was effected, with ultimate solid union, without any deflection or bulging at the point of fracture, thus temporary arrest of growth was the only possible explanation for it. The shortening in some cases was slight, yet clearly apparent on measurement. Similar shortening occurs, after arthritic or osseous disease in children, and reasoning from analogy, we may expect to find it after fracture when there is long confinement in bed.

Fractures, or diastasis, contiguous to the arthritic structure give rise to difficulty in diagnosis and treatment, because of the copious, sanguinous extravasate into the peri-arthritic structures or the capsule and prompt diffusive inflammation, which so generally follows. At the complicated articulation of the elbow, the T fracture through the head of the humerus is almost certain to leave some impairment in motion. In the process of repair, there is sometimes a hyperostosis, with a pushing forward and outward of the trochlear hollow of the olecranon, resulting in a disturbance of the mechanical relations between the articular surfaces.

Diastasis through the epiphysis, when the extent of displacement is slight, in my experience, unites more quickly than osseous fracture. But, when this occurs under fleshy parts like the shoulder or hip in the delicate or strumous, its recognition is not only difficult, but it may lead to arrest of growth or impairment of joint action. Such results, however, are exceedingly uncommon. None have ever come under my observation.

In connection with this subject of diastases or fracture through joints, in order that judicious treatment may be instituted, an accurate knowledge of the condition existing is necessary, and here is where the difficulty comes, for oftentimes this is practically impossible, as every unbiased, experienced surgeon must admit.

In epiphyseal separation of the humeral head at the shoulder joint, although some writers of fertile imagination and remarkable descriptive power of what does not exist, have laid down *seriatim* the differential features between this and bone luxation. Jonathan Hutchinson states that all, or nearly all so-called shoulder-joint dislocations are but epiphyseal diastases. This is no doubt an exaggeration, though not far from the truth.

In either epiphyseal loosening at the shoulder-joint intra-articular fracture or dislocation in the child, although the anatomic elements involved are dissimular, the reactionary efforts are quite the same in all, hemorrhage, laceration of adjacent soft parts, inflammation, exudation with consecutive fibrosis and extensive adhesions in all or many of the overlying parts, occurs in each equally frequent.

Compound Fracture in Children.—In the present state of our knowledge and the great advances made in the surgery of the extremities, the time has come, when compound, comminuted or complicated fractures in children, should be separately considered and their distinctive etiology, pathology and treatment should be taught in our medical schools. Nevertheless, the antiquated and vicious system of dealing with all types of fracture, in the various epochs of life, on the same principle, is yet adhered to, even in our latest text-books on surgery. It has been noted, that the limbs, during the evolution of growth, are organically, totally, unlike those of middle or advanced age, being less firmly set, highly vascular and elastic. The lower extremities of the child carrying a lighter body are comparatively exempt from those shocks and jars inseparable from advancing years.

The recuperative energy of the osseous system of the child possesses marvelous activity, for it can not only repair, but also reproduce or restore shattered or destroyed segments of a bone-shaft. Therefore, by the aid of antiseptics and by utilizing those osteoplastic procedures so elaborated and graphically described by M. Ollier, we are often enabled to preserve limbs, sometimes so mutilated, as to seem to justify immediate amputation.

Morbid Anatomy and Pathology of Juvenile Compound Fracture.—Compound fracture is less frequent in the young, than in the adult for several reasons. The first is, at this stage of life the occupations of children are not so dangerous. Serious injuries most often befall them, however, through their venturesome tendencies and heedlessness. Proportionally for their volume, the solid elements of their bone shafts are better protected by the enveloping parts, which are highly elastic, as their fractures are mostly transverse, muscular action is weaker and the periosteal investment thicker, displacement after fracture is slight. The younger the living tissues the greater their resistance to the influence of pathogenic germs which may infect their protoplasmic elements, every thing else being equal.

Compound fractures only become grave injuries in a child, when the violence has been so great as to totally destroy the limb, or when large vessels have been opened and a considerable quantity of blood has been lost, as even moderate exsanguination in childhood is often attended with alarming shock.

The loss of a considerable area of integument by primary violence or secondary gangrene is a serious complication. The skin can never be reproduced, but frequently the bone can. The shock succeeding compound fracture in children is usually greater than in the adult, and the depression of the vaso-motor system is so pronounced that a marked pallor and depression of temperature pervade the entire surface of the body. Compound fractures which open into the joints, when sepsis is prevented and the vascular current is intact beyond, often do suprisingly well.

Several such injuries involving the elbow and ankle joints of children have been under my care

When there had been no loss of bone, whether the fissuring of bone extends into epiphyseal line or not, it is remarkable what a large degree of function is restored What frequently imparts a serious aspect in these cases is when the patient is strumous, and when inflammatory changes degenerate into widespread, suppurative infiltration, with sloughing

In all these cases of compound arthritic fracture, as in the simple variety involving joints, more or less inevitable displacement of the fragments, hyperostosis in callous formation and organized or semi-organized tendino muscular adhesions, for some time after osseous consolidation, more or less lock the joint and induce muscular atrophy In the youth, all of those pathologic conditions, as a rule so serious and often permanent, in the fully developed individual, are largely minimized in the ultimate effects by appropriate treatment and the innate tendency of the economy to restore adjustment and a large degree of function in an injured part

Treatment—This brief review of the subject will not permit anything like an extended notice of the subject of diagnosis, something which must always precedes definite specialised treatment, but to omit it altogether would be to vitiate, largely, whatever value the present contributation may possess It may be said, as a general rule, that fractures in children are most difficult of detection In fact in fractures contiguous with joints, it is sometimes quite impossible to recognize them In this class, the safest course to pursue is to proceed on the assumption that there is a fracture, and apply treatment It has been pointed out, that immediately after many fractures, tumefaction, sanguinous extravasate and muscular spasm, render examination severely painful, difficult, and sometimes indefinite More than once, when a case of injury, assumed to be fracture, has come under my care, when by moderate manipulation its detection could not be determined, I have made a show of adjustment and set the limb aside, under soothing dressings until the following day, when the real examination was made Almost invariably now, crepitus could be detected and the quality of the osseous disorganization ascertained with the infliction of no severe pain

Incision as an aid in diagnosis of fracture of a bone shaft is a procedure of questionable expediency Notwithstanding what asepsis may prevent in flesh wounds, when we deliberately open into a fracture of a bone shaft, we introduce fresh complications We at once make a simple, a compound fracture and expose the parts to the dangers of suppurative infiltration or necrosis In any other than rare and exceptional cases as a diagnostic resource, the incision should be condemned A practical knowledge of the general rules of diagnosis will seldom fail us without resorting to this extreme measure It is only necessary that the examination be made with gentleness and thoroughness, and when the suspected fracture be located contiguously with the shoulder or hip-joint, the patient should be placed in a position of complete muscular relaxation on a table or in bed, on the back In this connection it may be well to give a warning against the possibilitity of diagnosing fractures which do not exist

It certainly is no reflection on one's knowledge or skill when in doubt about the existence of fracture to frankly confess it to the patient, his friends or relatives, but it becomes a reprehensive line of conduct to decide alone, on a case and put up the limb in an apparatus or adjustment, for the cure of an imaginary condition Such mistaken cases have come under my observation in nearly all the long bone shafts, at the wrist and the elbow, the clavicle, scapula and neck of the humerus, the femur, the tibia and fibula

Pulmonary anesthesia is an invaluable adjuvant in diagnosis of various fractures It may be laid down however, as a law, *that when detection is only possible by this agent in the case of bone trauma, the extent of damage is not great, and the establishment of definite diagnosis will not materially effect treatment* It is very seldom necessary in the youth, and is not without its dangers We usually resort to it, in order to avoid the imputation of ignorance or neglect in complex cases, perhaps also as an aid in reduction or setting

Treatment—Simple Fracture—The limb of an infant or youth is more intolerant of protracted restraint or severe pressure than the adult, with him are commonly incomplete fractures, or non-displacement of the fragments, and hence not a few of them, are overlooked, or not discovered, until a large callus or deflexion attracts attention Although primary union of bone is prompt, the uniting bone slowly calcifies, and the tendency to bowing remains for some time after apparent union, at the sight of fracture

A mistaken impression prevails, that treatment of fracture should be instituted on the spot, *sur le champ*, as though the limb must perish or fall apart, unless it be at once placed in a rigid adjustment This view has often led to most disastrous consequences and calls loudly for the voice of a Pott, or of a world-famed luminary, like Senn, to condemn it

The aim to be sought for *immediately* after simple fracture, is to place the limb in a comfortable position In none is this more important than in the tender susceptible child Sometimes, this end is effectively accomplished by immediately setting the bones and splinting the limb, while in others the best splint is a bed, the limb well bolstered and enveloped in soothing dressings, until the following day or such time as the inflammatory disturbance has disappeared, tumefaction has diminished and muscular spasm has passed off Nothing has been lost by this delay, as the work of repair is impossible until the subsidence of local engorgement

The treatment of uncomplicated fracture limbs in general embrace but a few broad principles, which apply to all ages, they must, under certain conditions of age and environment be modified

After all severe fractures the system sustains more or less shock The body needs rest, no matter whether it be the upper or lower extremity which is involved The patient should *first* be treated, then his injured limb This should be comfortably adjusted, for if severe pain persist after the limb has been set, something is wrong

On Splinting—As there is seldom much displacement, if any, in several varieties of fractures in children, we will do enough in many cases at the first visit, to simply place the limb at rest without any other investment than a bandage, until after the primary callus is formed, when a support is adjusted to obviate deflexion in the ossifying stage Osseous apposition of the fragments with retention is desirable in those cases of fracture attended [illegible] much [illegible] placement

In order to realize this end or [illegible] dr ends of the bones into as convenient contact as possible and so retain them, we depend mainly on two or three things the first, the most important and more valuable than all others combined, is *muscular relaxation*, or postural treatment This permits unfettered liberty of the circulation, and the highest possible activity of the nutritive processes In the lower extremity, for the leg, the foot may be used as a counter-extending force, in the thigh, both the leg and foot In the arm, the forearm is the counter-extending weight With the child we have little to fear from bed-sores, and he bears enforced confinement with less impairment to health than many who after middle life accumulate additional flesh Desault was the father of the method of fracture treatment now so generally adopted, in which the principles of muscular relaxation is so generally discarded Long splints are applied and artificial extention is generally employed

To enter into the comparative value of various methods would involve a large task, which can not be undertaken here, but, after fifteen years experience in a large traumatic surgical service in hospital and a fair share outside, I am convinced that mechanically splinting and confining *all* fractures is an error that the results are not as satisfactory as they should be and that the time is not far distant when Pott's principles in fracture treatment will again reign supreme

But even now, in fractures contiguous to or involving the articulations, our sole reliance is muscular relaxation and postural treatment

Overlaying apparatus in joint fractures are little more than masks, which practically accomplish nothing They, however, fulfill a psychical affect, something often highly necessary with the fault finding and supercilious

Early passive motion, in my experience, is highly desirable in all fractures of children which involve the articulations Not a few distinguished surgeons are opposed to it, in my judgment very much to the disadvantage of the injured

Marked deflection of long shafts, after treatment is completed, very justly reflects discredit on the attending surgeon, when the child is constitutionally sound It is most frequently seen in the female

We may find that the patient has a lump of bone projecting outward where the shaft has the least muscular investment, the limb is very markedly shortened, and the patient walks with a limp It is not my intention to reflect on the surgeon for this blemish, for as a sequel of fracture treatment it may occur in the hands of anyone, only it should not be allowed to remain if of an aggravated type

It is surprising how easily it is overcome if taken in hand early The bone is then pliant and by the use of moderate force can be easily pressed into position, the bowing overcome and length restored Some of these cases of deflexion are dependent on an organic defect in the osseous elements, a species of malnutrition not well understood, in all instances, however, it is well to favor consolidation of the fragments by close attention to the hygienic surroundings, proper nourishment, tonic and reconstructive medicines

Massage, bathing, kneading the muscles and frequent changing the position of the patient are helpful aids, and as Championiere has lately demonstrated, entirely innocuous as disturbing agents of the approximate fragments

On the Treatment of Complicated Fractures or Open Compound Fractures —Although every fracture not attended with an open wound is designated "simple," under very many circumstances it leads to a wrong inference, hence it would seem both desirable and necessary that in every instance when the arthritic, neural or vascular structure, to a considerable degree, share in the traumatic disorganization of bone, the word *complicated* should be substituted for "simple" and the word *open* for "compound "

To the inexperienced the word "compound fracture" has a most serious significance, while as a matter of fact not a few of the cases embraced under this class recover with better limbs than the "simple" And, of the latter occasional instances occur, when the damage to the fractured limb is so great, as to, later, demand amputation or lead to a wasting or anchylosis of the limb

Modern measures, inhibiting germ infection, great advances in osteoplastic science, combined with perfected mechanical adjustment and prothetic devices, under no circumstances justify the sacrifice of a limb or a part of a limb after an injury in a child, unless the parts have suffered *total* death by violence

In open, compound fractures of the limbs our first concern must be to arrest hemorrhage This should be done as far as possible by exposure, ligation, torsion or immediate compression of the spouting arteries When bleeding is venous or parenchymatous, moderate tamponage and bandage pressure will answer for its suppression, but under all circumstances very hot water as a styptic or protracted elastic compression, with Esmarch's bandage, as a hemostatic agent must be condemned, the former for its destructive action on the vital structures and the protoplasm, and the latter, from the danger of gangrene following

Our next step is cleanliness and all that it implies in a strict surgical sense Now, we will endeavor to comfortably adjust the fragments and provide them necessary support, under appropriate dressings until general and local reaction is established In the average case of severe open shattering of bone, with more or less displacement and extensive mangling of the tissues, the safest course of practice to pursue is not to undertake too much at the primary dressing

From a theoretic standpoint this advice may seem untenable and injudicious

The parts, it is true, are now more or less benumbed, and may be handled with less pain, yet in all cases in which any tedious manipulation is necessary an anesthetic must be employed But in all these cases severe constitutional shock is present, muscular spasm drags on the fragments and infection is so constant that primary union seldom follows without suppuration and limited gangrene of the damaged parts

Better by far, in all very serious cases of this class to be contented with temporary adjustment of the mangled limb, secure against fresh infection and hemorrhage for at least twenty-four or forty-eight hours or longer, unless special indication call for a change

The question as to what we shall do with the displaced fragments to secure their surfaces in permanent contact, by wiring, pegging or riveting what fragments we shall return and what detach, how we shall place the osseous structures in position most favorable to regeneration, when there has been much loss of bone substance, belongs to the subject of osteoplasty, a branch of the healing art which every surgeon must familiarize himself with and master who would perform his whole duty to his patient As this subject is too large to be considered in this brochure, it is enough to say what my own experience long ago convinced me of, viz, that under no circumstances should any fragments of bone be removed that preserve an intimate attachment with the soft parts In the upper extremity our every effort should be strained to preserve every possible particle of bone tissue that possesses a cutaneous investment, and no excision or division should be done through any other than parts hopelessly devitalized

Modern prothetic appliances have done much to substitute a sacrified limb, at least for appearance, though as an appendage for the lower extremity they sometimes support the body and carry it, nevertheless, let no one deceive himself into supposing that any artificial support can ever fulfill the purposes of a natural one, and needlessly sacrifice any part of the lower extremity

There are several reasons why a severe fracture through any part of the lower extremity is more difficult to treat than in the upper It is here where fracture is very common, and in railway or other serious accidents the greatest extent of mutilation is inflicted Yet, when we can provide proper attention to a case it is surprising what results we may realize in many of the frightful cases of bone disorganization

As an example I might mention one case of open fracture in a child of 6 years, run over by a street car, in whom the entire tibial shaft was so shattered that it was entirely shelled out through the long breach in the tissues Only the epiphyseal ends and periosteum remained In one year this entire shaft was regenerated, there was no shortening and no limping In another, a young adult, the bones were so smashed that a little more than four inches of the shafts of the tibia and fibula on damaged side had to be removed, and the widely separated ends pressed together In six months union was complete By a rise on sole of shoe shortening is compensated for, no crutch or walkingcane is used and last autumn he won a wager, walking from One Hundred and Twenty-fifth Street, in Harlem, to Coney Island, a distance of about twenty-one miles, leaving Harlem at 6 in the morning and returning before 6 in the evening This he accomplished with ease

We can secure surprising results in most any description of fracture in the leg of a child, below the knee, provided the circulation be intact, but when the fleshy parts are torn open in femoral fracture, we have good grounds for the most serious apprehension

The extent of shock is always very great, in compound, femoral fracture, and in most cases there is considerable loss of blood before efficient surgical care can be rendered In spite of anything that we can do to prevent it infection will set in and spread, always endangering life through infiltration, resorption and pyemia

There are several varieties of fracture of common occurrence in the adult, rarely or never seen in the child In them I have never seen a fractured patella or a Pott's fracture One instance of intracapsular fracture at the hip has come under my care, in a youth of sixteen years Subsequent to the injury necroses of the surface of the distal fragment developed and provoked suppuration On incision through the anterior plane of muscles, the capsule was opened and the neck was cleared away and the head left The operation was performed four years ago The patient is now a full-grown man with a very useful limb, except for about three inches shortening

I never yet met with a case of Colles' fracture in a child, although some authors speak of it occuring during the stages of growth I doubt their accuracy of diagnosis Colles' fracture almost invariably leaves deformity through rupture of the internal lateral ligment and displacement outward of the head of the ulna, impaction and diastasis of the radical head

Deformities, therefore, should be rarer after juvenile fracture, functional restoration better and restoration of strength greater after treatment than with those approaching or after the meridian of life

In conclusion, as far as treatment is concerned, it may be said that as applied to so-called "simple" fractures, or the complicated, involving the joints, in the child there has been no special progress made in late years, the mechanical problem is not settled and our best authorities are not in accord on the question of attitude or position of the limb, on immobilization, extension and counter extension The fact is, that mechanical aids in fracture have but a limited application, as we are dealing with a living machine not subservient to any physical laws in its vital processes

Enduring progress only has been made with the complicated and open fractures, in which, by adoption of antiseptic methods and osteoplasty, safe conservatism is possible and now we are enabled to preserve limbs formerly condemned to amputation or a crippled condition, which rendered them little more than useless

DISCUSSION

Dr Ella E Barnes, Birmingham—I would like to ask Dr Manley if in the German boy there had been a growth of the other limb sufficient to make the shortness appreciable?

Answer—About an inch

Dr Barnes—Will time ever overcome that by the extra use of that limb? Suppose a high sole were put upon the other limb and this limb allowed to swing, will the shortened limb ever become longer?

Answer—I am not able to inform the Doctor As far as my experience goes, there is no remedy for shortening We know that the limb would stop growth during the process of repair

Dr Daniel H Cunningham, Chicago—I would like to ask Dr Manley the manner in which he applies his splint, or what splint he uses to keep the limb quiet and prevent the edges of the bones causing laceration

Answer—I have nothing special I adapt treatment to each individual case Some families can afford splints and others can not We should not wed ourselves to any particular splint in the adjustment of the limb

Dr A C Cotton, Chicago—I want to ask Dr Manley would he make any objection to blanket splints?

Answer—They are excellent

Dr Manley—We have to consider the matter of expense There has been devised a splint made from strawboard which acts admirably in children It is very light and can be easily cut down with the knife, and by submitting to hot water it softens and you can shape it to the limb I think it is about fifty cents a sheet and a sheet is enough to make about a dozen splints If I could not get anything else I would use plaster of Paris, but I do not believe there is anything else has given us so many cases of distortions and deformities When you remove it you have to give the limb more or less jar to get it off The chewing with the knife, or whatever it may be, causes more or less jarring of the limb, and you can not put a plaster on the limb from which the limb will not fall away and the dressing will become loose Particularly in fractures of the forearm in children it is important to inspect the limb every day I have known plaster encasements, in which there was no rise in temperature and everything seemed to be going on splendidly, but after ten days when we cut down through the plaster, both bones were found projecting through the skin, and black So I believe the plaster has a very limited use in children It is unyielding and you might just as well put the limb in a vise, and after considerable disorganization of the soft parts, in fracture, there is a great deal of tumefaction and it is important there be room for this The plaster simply puts the patient in torture When a fracture pains there is something wrong about it, but with the plaster applied, we have to cut down through the hard, rigid plaster, shaking and jarring the limb and causing more pain than ever I have a positive prejudice against plaster, except in occasional cases

Dr J A **Work**, Elkhart, Ind —I have had some cases where I did not expect to save the limb, more particularly the fingers and toes, and I am glad to say the results were so good I am ready to attempt to save almost everything As to splints, I use almost exclusively the binder's board What do you think of the binder s board, Doctor?

Dr **Manley**—I like it very well

Dr **Work**—It is soft and pliable while wet and you can adjust it very well, indeed You can allow for distention, while the inflammatory process is going on, and after the inflammatory process you can retract the splints to the limb If you have a perfect cast of the limb, you have your limb in perfect shape I think the wet splints have a tendency to keep down the first inflammation

Dr C G **Slagle**, Minneapolis—Dr Manley has spoken of the shortening, which might sometimes help us out in suits It appears to me that if the child is confined to bed two or three months, the sound limb would grow rapidly while the growth of the affected limb would be largely suspended I have been surprised sometimes at the shortening but this explains it nicely As to setting the limb, the Doctor is very conservative But I suppose, Doctor, if you were called immediately you would set the limb, but after the swelling began you would not do so until the swelling subsided

Dr **Manley**—As the first principle we should put the limb in a comfortable position, and that would imply setting and leaving the limb in a temporary dressing, not putting the permanent dressing on until the swelling is over

Dr A C **Cotton**, Chicago—The remarks have brought out that no absolute rule can be devised or laid down to fit surgical procedures We should let the limb alone and put it in a comfortable position, if only on a pillow If we want union by first intention, the ends of the bones must be approximated, nicely coapted Although we get relief from pain by putting the limb in a comfortable position, unless we approximate the end of the bones we will not get primary union We might have a dozen cases without that condition, while in the thirteenth it might be found A whiff of chloroform could be given, the ends approximated and a splint applied The Doctor expresses my views of those of plaster of Paris dressings I suppose the orthopedic surgeon, with the necessity for rigid retention apparatuses, could hardly get along without the plaster, but he does not have swelling we have to deal with

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Rhinopharyngolith —This is the name given by Janatka of Prague to a body removed by him from the naso pharyngeal cavity of a nine year old boy It was found to consist of a tailor's thimble, which the child was supposed to have swallowed when he was one year old, and had thus remained imbedded in the nasal cavity for eight years, considerably disintegrated and coated with calcium carbonate and calcium phosphate It had caused difficulties in breathing and hearing, and a tumor had been diagnosed —*Wiener Klin Rundschau*, September 20

OBSERVATIONS IN CASES OF EPILEPSY FOLLOWING INJURIES TO THE HEAD IN INFANCY, CHILDHOOD AND EARLY YOUTH

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY W A DIXON, M D

RIPLEY, OHIO

In introducing this subject, the purpose is to express my convictions arising from observations in my own practice that great care should be used in rearing children, that the head may not receive injuries, lest epilepsy follow as a result

During my first years of practice I had no conclusions of my own as to the liability of epilepsy to follow injuries to the head in early youth, and sought to discover in each case presented to me a cause in heredity, reflex irritation and the many other causes given in the text books

In after years, however, when the child that had received injury to the head was brought under my care on account of epilepsy, the importance of this subject became apparent to me

I can cite a number of cases whose history I am personally familiar with from the date of the injury received to the development of the epilepsy

I take no censure to myself in the treatment of the injuries at the time of their occurrence, because epilepsy developed in after-years, and cite the following cases, not to speak of treatment or of the character of the lesion, but of the fact that epilepsy did follow the injury and in the absence of any other known or suspected cause, must be considered the reasonable source in each case, and therefore that physicians should be under obligations to teach parents and others in charge of children the necessity of guarding against all injuries to the head that epilepsy may not follow as a result in after-years when the brain develops, the sutures unite and expansion or growth of the cranium ceases

Case 1 —J R , a boy aged 5 years, was kicked by a horse, fracturing the left parietal bone There was depression and symptoms of compression The fragments were removed, the depressed bone elevated The boy rapidly regained consciousness and made a good recovery with nothing to indicate that he had received so serious an injury At the age of 24, when he had attained to full growth in body and mind, without any premonitory symptoms he fell to the pavement in a fit of epilepsy His condition rapidly grew more and more grave, so that in two years' time he consented to an operation of trephining in the hope of finding relief Dr P S Conner trephined, finding beneath the site of injury within the membranes a cystic tumor large as a medium sized orange

Case 2 —W K , aged 6, was kicked by a horse on the frontal bone over the left eyebrow, causing slight depression with symptoms of concussion but not compression He made a rapid recovery and exhibited no results of the injury, until arriving at the age of 20, he was seized with epilepsy, which continued to become more and more aggravated during the three years following, when he died from exhaustion

Case 3 —G M , aged 10, was kicked by a horse in the middle of the forehead, fracturing and depressing the bone, causing deep coma The fragments of bone were promptly removed, and the depressed portion elevated The coma was quickly recovered from Recovery was rapid, with no evidences of the injury remaining At the age of 20 epilepsy developed He is still living and the victim of frequent attacks

Case 4 —L P , aged 8, was thrown from a horse, striking the crown of the head upon a small stone in the road There was laceration of the scalp over the left parietal bone, and slight depression but no symptoms of compression, and no line of fracture could be determined Recovery was prompt At the age of 28 epilepsy developed The paroxysms have continued to increase in severity until now the patient is a complete physical wreck

Case 5 —W B , a boy aged 12, stopped on the sidewalk to tie his shoestrings On attempting to set one foot on a step, the other slipped from under him, causing him to fall backward, striking the occiput violently on the pavement There were symptoms of concussion, lasting several hours In a short time epilepsy developed and continues to the present in an aggravated form

Case 6 —J F , aged 8, fell from a swing, striking the head upon a stone, lacerating the scalp and producing symptoms of shock which lasted several hours There were no symptoms of compression nor fracture Recovery was apparently perfect At the age of 18 epilepsy developed and continued for about three years, becoming more and more violent until death

Case 7 —J R , at the age of 5, fell from a fence, receiving a blow upon the head, producing violent shock, and was in a state of stupor for several days At the age of 16 epilepsy developed and continues to the present

Without reciting each case similar in most respects to the foregoing, I can call to memory many other cases of injury in whom no history of heredity, specific disease or reflex neuroses of any character whatever can be traced as a cause

Younger children, in my judgment, are in danger of epilepsy upon meeting with what may be termed every-day casualties, as falling down stairs, out of the high chair, off the bed to the floor from the porch to the pavement and other similar accidents where the head receives the blow

I can recall quite a number of epileptics in boys and girls to whom I was called at the time of such accidents as spoken of above at the crawling age of childhood Some of the worst epileptics I have seen have no history of cause beside the fall and consequent injury to the head of the infant

Meddlesome midwifery, it is to be feared, must be held responsible for some cases, the most wretched and hopeless we are called upon to witness, the forceps having inflicted injury to the head

Prof Chas D Meigs in his day, foreseeing the tendency to wantonly use the forceps, charged his pupils to remember that the best obstetrician was he who stood by his patient with his hands folded behind him

There are dystocias when the forceps must be used, when it would be criminal to not use them, though epilepsy in the child be sure to follow The point is this, that the utmost skill and care should be used to avoid injury to the fetal head lest epilepsy may develop in the child

I have seen two cases, not my own, it is reasonably certain resulted from injury in forceps delivery, and two more strongly suspected to owe their origin to the same cause, every other history of cause being absent

My experience is largely among rural people where the forceps are not often required or resorted to, and where of course epileptic results would be rare from such a cause, but if two cases come under the observation of each city and country physician during a quarter of a century, see what a vast army of epileptics follow in the wake of the forceps Epilepsy merits the attention of the physician from every standpoint Large numbers of epileptics are in every locality They are of all people the most unfortunate Too much can not be known concerning it How impotent all physicians confess themselves to be when confronted with it

In cases from trivial reflex causes treatment may be successful In confirmed cases medicines avail so little that both physician and patient tire of treatment

The surgeon on account of so small percentage of favorable results in the most hopeful cases operated upon is held at bay So the most rational procedure is to adopt preventive measures

If heredity, insanity, inebriety, specific infection and so on among the ancestors are found to be causes, the gravity of the affection demands that means be employed to curtail the transmission of the disease to posterity Knowing injuries to the head to be a fruitful source, all should unite every effort to teach and impress upon parents and others in charge of children to use all precautions possible to protect the child's head from every sort of injury, epilepsy having been known to follow what seemed to be a slight injury to the head It is not the purpose to speak of any theory of pathology or morbid anatomy

The literature upon the disease is enriched by the observations of eminent men in every age and country The same views are not long held by any student, for experiments and postmortems are likely to revolutionize any theory previously announced

Most writers regard traumatism overestimated as an exciting cause Experiments of any kind that disturb the cardiac or cerebral functions may excite convulsions and establish any theory desired

In relating cases I selected those in whom a record in the ancestral line, of heredity, insanity, inebriety, tuberculosis or specific infection did not exist, so that the fact of injury alone could remain as the factor, the kind of injury that can be in a great measure avoided by watchful care in the rearing of children

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PETIT MAL IN CHILDREN

Read in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY LOUIS FAUGERES BISHOP, A M , M D
NEW YORK

Idiopathic epilepsy is eminently a disease of children, occuring in more than three-fourths of the cases before the twentieth year So much is this true, that in epilepsy in older people, we always institute a special search for a local cause Of the causes of epilepsy we are not to treat in this place, nor indeed of the typical severe cases, but because we separate petit mal, we must not fall into the error of supposing we have to deal with a different disease Nor is it always easy from the description of parents, when there is no opportunity of observing the attacks, to be sure into which group the particular case should go

Though not a common form of manifestation of epilepsy in children still among a large number of cases there will be a certain number in which the disease at least in its onset takes this form On account of its comparative rarity and because of the proneness of young children to convulsive attacks of various kinds whose etiology is clearly to be found in local irritation, these minor attacks of epilepsy are seldom recognized by those whose attention has not been particularly called to the subject

There are certain physiologic considerations that must have weight in our diagnosis Up to about three years it is difficult to make the diagnosis of petit mal because the physiologic irritability of the nervous system is so great that we can not exclude a sufficient cause of irritation After about the of
three years the nervous system has ob a
or stability that makes the frequent
vulsive seizures an indication of epi
if there is a family history of a t

attacks at a later period, which have not proved to be epileptic, this circumstance must be given due weight. As in older people we must exclude kidney disease and injuries to the brain.

In addition to a due appreciation of this period of irritability we need to have a more symmetric comprehension of epilepsy. Petit mal is not one disease and grand mal another, but they are different manifestations of the same disease. It is for the sake of emphasizing petit mal to the dignity of true epilepsy that this study of that particular form of epilepsy in children has been undertaken. The attack of petit mal is a sudden temporary unconsciousness, often accompanied by certain other phenomena. In a large number of cases the eyes become fixed, the face pale, and in a moment the patient assumes his ordinary conditions; in others, the patient talks in a wild manner, often upon some subject entirely disconnected with the surroundings present. The patient may perform some curious automatic action, or go through with some particular act while in the epileptic state.

A very curious case came to the Vanderbilt Clinic, New York City, a few days ago. The child, 7 years old, had frequent attacks in which she suddenly seized her head by the hair on either side and then there was a jerky motion of the arms and head, at the same time one foot was raised as high as possible and the child would stand for a moment on the other, but if not supported, would fall. This occurred while under observation about every fifteen minutes. The child was unconscious during the early part of the attack, which lasted probably during the fraction of a minute. Another child also seen at the Vanderbilt Clinic recently, suffered a compound fracture of the skull a years ago. A few weeks ago she developed attacks which come on every night about ten o'clock, after she had been in bed an hour or two. She wakes out of her sleep in a fright, and almost immediately becomes rigid and apparently unconscious.

An attack of petit mal may assume a great variety of forms. A mere momentary blurring and loss of consciousness at frequent but irregular intervals, or sudden sensations of fright without apparent cause, or a feeling of something in the epigastrium and rising in the throat. Thus in a case coming under observation while preparing this paper, a child of five years old had convulsions during the first two or three months of life, and since that time had been subject to attacks at intervals, the mother says "a thousand a day," during which the child's head suddenly drops, the arms are stiffened, and after an attack of momentary unconsciousness the child goes on as before. Such a case is of sufficient severity to attract the attention of a physician, and to make a diagnosis perfectly easy, but it can be seen that attacks of the same nature occurring at infrequent intervals, and of which we have only the account of parents, would nearly always be disregarded. When associated with *grand mal*, or when it has been followed by *grand mal* later on, the diagnosis of true epilepsy is of course very much more certain; still when studied carefully these cases assume a certain definiteness, which it is hard to convey by a written description.

The diagnosis must rest on the recurrence of the attacks irrespective of gastric irritation, the fact that they are not cured by the removal of sources of irritation, the persistence of the type of the attacks and the occasional recurrence even in quite young children of the epileptic equivalent, *i. e.*, periods, during which instead of loss of consciousness, the patient does and says things entirely disconnected with the time and place. The attacks must be distinguished in very young children, first of all from convulsive seizures due to local irritation. As we said before, under three years except in very well marked cases this can hardly be done.

Simple vertigo may resemble petit mal but the affection of consciousness is usually described as somewhat different. In vertigo there is a characteristic feeling as if objects were whirling around. The child says, "the house is going around." In epilepsy there is more the sensation of simple blurring or confusion. Vertigo is preceded by a period of weakness, while the onset of petit mal is always sudden. The patient is stiff for a moment, stares, and there is a momentary loss of consciousness, but the attack passes over as suddenly as it came, and he goes on with the occupation in hand. In vertigo the body is limp and the process is more gradual. In petit mal the pupils are dilated and the eyes immobile. We must distinguish hysteria, which occurs frequently enough in children. This may be done by the tightly closed eyes, the tremulous lids, the persistent rigidity, but especially by the existence of hysteric attacks of other types. Petit mal may occur every few moments for years without changing its form of attack. Of course, this rule is not without exception. Thus in a young person at present under observation attacks of petit mal are sometimes replaced by short outbreaks of ill temper, which are entirely foreign to her ordinary disposition.

While we have begged the question of a certain diagnosis of petit mal during the first three years of age, yet cases from time to time have come under observation in which a study of the particular case has convinced us that it was one of true epilepsy. Its frequency during this period of life is shown by the statistics of Gowers, who found that 12½ per cent of all epileptics had developed the disease *before three* years, and of these one half had developed during the first year of life. In our own histories we find fairly frequent instances of fully developed epilepsy in later life having originated as petit mal in children. This history is brought out more often if, as with us during the last few months, we have inquired particularly for symptoms of petit mal antedating the onset of convulsions. It would seem especially interesting to inquire as to the early existence of petit mal, in those cases in which under treatment, petit mal is substituted for the typical severe convulsions. Some of these cases impress one as if the attack of petit mal was a development of an epileptic aura, which stopped short of the convulsion. In some very rare cases there has been a distinct sensory aura preceding the attack of petit mal.

Petit mal is essentially a chronic disease, and for that reason it is difficult to formulate the best plan of treatment. However, special stress should be laid upon the care of the stomach and all those measures which are included under the name of hygienic management. As to drugs there has been a great variety recognized. Petit mal is more intractable than the severer convulsions, but the same treatment which has been found best in these has on the average given the best results in petit mal. After experimenting with a great variety of drugs it has seemed that bromid in moderate doses has given on the average the best results. Occasionally a case has shown improvement when under nitro glycerin Belladonna in our hands has never given any results, and the same is true of borax, digitalis, and a number of other drugs

If our conception of epilepsy as a stormy and ungoverned discharge of the motor cells of the brain be a true one, which belief is strengthened by the fact that seizures are more likely to take place in those who have been sleeping, or who habitually sleep too much, why would it not be possible by systematic training of these cells to diminish the liability to such outbreaks? Systematic exercise of such a varied kind as would exercise all the muscles of the body might thus have such an effect beyond that due to the mere improvement of the general physical condition

The parents of the child should know of the very possible persistence of the affection into adult life, so that everything should be done to render the disease as bearable as possible to the little patient The friends and attendant should be instructed to speak as seldom as possible of the attacks to the child, and should be thoroughly instructed that attacks of petit mal are entirely beyond the control of the patient An effort should be made to treat the child as nearly as possible as other children, not restricting it of its liberty, or treating it like an invalid in any way, except as far as is necessary to carry out the proper regimen and treatment

DISCUSSION ON PAPERS OF DRS DIXON AND BISHOP

Dr **Thomas H Manley**, New York—You know how unsatisfactory and discouraging the teaching of obstetrics to the medical student has been It has often occurred to me it would be better for humanity if we had no such science as the art of midwifery You will remember it was claimed the mortality from sepsis had been reduced to practically nothing, through the adoption of the antiseptic treatment, washing and flushing the vagina precedent and antecedent to confinement, and then, again, we have been taught later the position we are coming back to, the best thing to do is to do nothing at all in the way of using solutions about those passages The tendency is, that the ideal man is the one who can make a diagnosis without passing his finger in the vagina Then we will not have to deal with a sepsis, because pathogenic germs do not normally belong in the vagina When the forceps are used damage may be done in the way of lacerations and tears of the cervix, vagina and outlet, so far as the woman is concerned, by not allowing nature to gradually open the way and send the child along by slow and natural stages Next, with reference to the child, I think the effect of the forceps is murderous, perhaps not at first but ultimately You can not make me believe the strength of a man with the forceps locked on the fetal head, and perhaps a couple of women holding the women in the bed, will not injure the delicate structures of the fetal brain In my own family, the only one who has manifested any nervousness, and now she is an adult, was the first born, in whom I believe the physicians prematurely applied the forceps and damaged the head I would not allow the forceps to be used on any of the others and they have no bad symptoms

Now as to trauma as a cause of epilepsy That has not been my experience, and for fifteen years, I was connected with a hospital in which traumatisms constituted perhaps four fifths of the cases In New York we have thousands of cases of traumatisms, from children falling from the fire escapes We have, consequently, many cases of skull injuries, but my experience has not been that trauma in itself is a cause of epilepsy I have traced quite a number of cases, where it became necessary to trephine and elevate depressed bone, the children had been brought in the ward perhaps unconscious, and I could not find in enough of cases the history pointing to trauma to convince me it was a positive etiologic factor in epilepsy as a general rule

As to the surgical treatment of epilepsy, I have trephined quite a number, who had come into the hospital for that special purpose After Professor Horstley's paper, which did great damage from claiming he could do what could not be done, I hoped something might be done for the epileptics and I trephined In perhaps about a quarter of them I found those gliomatous tumors, the myxomatous substance between the dura mater and pia mater Not in a single instance was there anything but temporary relief I believe there is a question whether the relief was from the loss of blood, the opening of the scalp, the anesthesia, the psychic effect of the operation or what If there is anything we owe to each other it is to be truthful We can not get the facts unless we get the cases that do badly as well as those that do well, and I have not hesitated to go before my optimistic brethren in New York and ask them to show me one case which showed relief from operation But if we have evidence of distinct depression of bone, it is very clear what the line of action should be But otherwise I doubt the expediency of operation We should not overlook the fact that these operations are not entirely innoxious I have known more than one patient to lose his life from hemorrhage When you start a hemorrhage in the brain, which is an extremely vascular organ, you can not stop it readily You can not apply pressure without pushing a hole through the brain substance

Dr **J A Work**, Elkhart, Ind —One point came to my mind during the reading of the first paper The author did not say much about etiology in petit mal in children It seems to me we ought to determine the primary cause of all this trouble He said we should look well to the condition of the child's stomach, to the development of the child, to its food, its environments It seems to me there is where the trouble originates in early infancy or childhood, when we consider that one half of the deaths that occur are in children under 5 years of age I say the same of the second paper read We do not go back far enough in etiology It has been my fortune to see cases of epilepsy that have orignated traumatically I would like if the Section would permit the time, to report one or two of these cases One case was that of a soldier, on his way from Indianapolis to another point, who fell off a flat car and was not found for two or three days When found, he was suffering from depression, I think in the right parietal region The history of the case was that the patient was unconscious for probably twenty four hours The later history of the case I had from his own lips After returning from the army, although a molder by trade, he went into the study of law, about fifteen years after the injury, and he said from the time he recovered consciousness until I was in conversation with him he had not been void of pain in the region where the injury was received, except when he was asleep I was called one morning early He had gone to the cooking room to build a fire and was later found on the floor This was the first attack he had had of epilepsy, some fifteen to twenty years after the injury He seemed to recover as if he had awakened from a sleep, and wanted to know where he was, how he came there, etc The attacks became more frequent, and he became more imbecile and died about two years after the first attack A postmortem was held Under the dura mater, at the base of the brain, we found a tumor about the size of a turkey's egg, flattened out, which we supposed was the cause of the epilepsy and death

Another case was that of a soldier injured at Chickamauga by a shell He lay on the field for some hours, and the surgeons pronounced his case hopeless He fin recov d and served out his term in the army But h on his forehead in the injured region, wo insensibility After his return home, laborer, he fell down with epilepsy, and found he could not obtain employment because of his attacks, which occurred every two weeks I saw him have an attack near my office I thought he never would never recover from it In two weeks, after preparatory treatment, I trephined and removed a three quarter inch disc No evidence of fracture of the skull was found The skull was very thick In two weeks from that time he had a slight attack and that was the last He died some ten years afterward of another disease There was a case of cure, to all intents and purposes, by trephining

Dr Harold N Moyer, Chicago, Ill —I can not allow the *opportunity to pass without making a remark* or two upon the papers with reference to epilepsy This disease is one of the most interesting in our pathology I think we are apt to forget this is the morbus sacer, the sacred disease of history I believe epilepsy is the oldest disease existing I believe it began when the animals began to have nervous systems Animals have the disease, cats are notoriously affected with it, horses have it under the name of "blind staggers," elephants have it without a doubt, and how far down the scale it extends it is impossible to say It probably existed prior to the stone age, even prior to the time when man made his advent upon this earth We understand it now no better than they did then We absolutely know nothing about the pathology or the pathologic anatomy of epilepsy We know nothing as to its etiology, more than the exciting causes which have been mentioned Head injuries, the importance of which has been well brought out, I consider furnish many cases of epilepsy There are doubtless many other causes, but it is well to remember these are merely exciting causes Many children receive injuries who do not develop epilepsy Why do those who receive these injuries not have epilepsy? The difficulty is that the underlying etiologic factor in epilepsy is absolutely unknown to us If we understood that, we would know its pathology When we come to the question of treatment, the same thing applies, not knowing the pathology and etiology, the treatment must necessarily be vague But I wish to emphasize the statements made by Dr Manley Operations for epilepsy undertaken indiscriminately because the patient is epileptic, should be discouraged I believe it is almost malpractice to operate in these cases, for you thereby add a very severe trauma I want to be understood in the proper sense, for it would not be malpractice if the operation is demanded by some injury, depressed bone, etc But otherwise I have never recommended skull operations except in the form known as Jacksonian epilepsy where the center could be well localized I believe the literature of the subject justifies very strong statements on this question

The paper by Dr Bishop is very interesting The Doctor was kind enough to give us his diagnostic rules I confess as I listened to him I thought I would be able now to make a *diagnosis of* epilepsy in childhood with some precision, but I fear I will not be able to apply the lines he has laid down But there is one good rule, which I shall substitute for those given by the *Doctor, and* that is if I have brought to me a young child in which I suspect epilepsy, I shall assume it is epilepsy and treat it as such If it is not epilepsy, such treatment will do no harm, and *if it is epilepsy in its incipiency,* then is the time to do good with treatment If there is any one rule in this disease, it is to begin treatment early After the condition is confirmed, treatment is almost entirely hopeless The petit mal is then more hopeless than the grand mal, because the petit mal is accompanied by changes in the brain which lead to early dementia and conditions leading to imbecility Unfortunately, the treatment is not all that could be wished I desire to emphasize the Doctor's remark, that the hygienic treatment is of the greatest importance As to the medicinal treatment, I am a firm believer in the bromid of sodium and use no other salt I do not mean to say that you should simply pour in this remedy and you will secure good results, for one third will not tolerate it, another third will be benefited, and another third will be indifferent to the treatment But I believe this bromid is better than any of the others, and it is much better borne than the bromid of potassium If it is given two hours after meals and well diluted, and the patient is frequently bathed, very considerable doses can be given without producing bromism The bromid of sodium given within the tolerance of the patient and begun early I believe is the most efficient treatment

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OPTIC NERVE ATROPHY FROM TOXIC AGENTS

Read in Discussion on Optic Nerve Atrophy in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY G E DE SCHWEINITZ, A M, M D

PHILADELPHIA

Toxic optic nerve atrophy naturally includes, 1, those cases of atrophy which result from a direct action of the poisonous substance, or its systemic results, upon the nerve cells, the nerve fibers or their *vascular supply, and,* 2, *those cases of atrophy* which are secondary to retino-choroidal or constitutional changes, which in their turn have been called into existence by toxic agents

The first class is separable into three subdivisions, namely, *a*, partial atrophy of the optic nerve with special reference to degeneration of its papillo-macular bundle, *b*, scotomatous atrophy of the optic nerve, which is progressive and may become total, and *c*, general atrophy of the optic nerve

1 Toxic atrophy of the papillo-macular bundle of the optic nerve preceded by inflammation or degenerative changes in this tract and associated with scotoma—Cases of this class manifest themselves either in the form of a chronic retro-bulbar neuritis, or else as an intoxication-amblyopia, because we may with propriety draw a clinical distinction between these two manifestions, although anatomico-pathologically they are in close accord, the intoxication-amblyopia, as Groenouw puts it, being a special form of retro bulbar neuritis

Axial neuritis, a term sometimes employed according to the same author, should be reserved for those cases characterized by a lesion, confined to the papillo macular bundle where it is axial in its course

Following Groenouw[1], the papillo-macular bundle may be described as consisting of those fibers in the optic nerve which supply the retina between the macula lutea and the papilla, and which lie in the temporal portion of the nerve tip, in a wedge-shaped segment The apex of this triangular portion is directed toward the vessels and occupies about one third of the surface of the papilla As it pursues its way through the orbital portion, it gradually approaches the axis of the nerve, which it reaches in the optic canal At the foot of the chiasm it occupies its upper and inner portion, but in the tractus it sinks to the central portion and remains there until it arrives at the brain

According to Sachs[2], the papillo-macular bundle in the papilla is a triangle with its apex at the vessels, and the base toward the supero-temporal quadrant Going backward, the bundle becomes elongated and assumes a crescentic form as it nears the optic canal

It would not be profitable at present to discuss the differences of opinion as to the disposition of these fibers in the optic nerve trunk, in the region of the vessel-entrance, and their division in the chiasm For their full consideration the reader is referred to the examinations of Samelsohn,[3] Vossius,[4] Nettleship and Edmunds,[5] Uhthoff,[6] Bunge, Sachs[8] and Stöltzing[9]

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[1] Graefe s Archiv 1892 xxxviii Abth I pp 1 70
[2] Archives of Ophthalmology, 1889 xviii No 2 pp 133 162

Upon this papillo-macular tract the baleful influence of certain toxic agents falls, and there result an augmentation of nuclei, a hypertrophy of the connective tissue and a wasting of the nerve fibers, the process being most intense, according to Sachs, in one small area, which he calls the "nuclear group" There is, in fact, an interstitial sclerosing inflammation comparable, according to Samelsohn, to the same pathologic process visible in interstitial hepatitis[10]

Some difference of opinion exists as to the exact nature of the nerve changes By certain observers the inflammatory nature of the process has been emphasized, by others (Sachs) its degenerative character To quote from Sachs, the diseased process starts in the interstitial connective tissue and the nerve fibers suffer secondarily from pressure, in the same manner as the hepatic cells are destroyed in cirrhosis of the liver The vascular changes of the two affections are also analogous, and, according to Sachs, there may be found "not only a proliferating endophlebitis, leading to connective tissue obstruction of the vascular lumen, but a peri-phlebitis, resulting first in a choking of the peripheral capillaries and afterward in small extravasations from them"

The pathologic lesions thus briefly described are based upon the results of about sixteen autopsies The most important of these are as follows

1 Samelsohn[11] The patient suffered from double retro-bulbar neuritis, which began with the clinical picture of an intoxication-amblyopia, the central scotoma being at first relative and later absolute death resulted from chronic heart disease The abuse of tobacco and alcohol was not substantiated

2 Nettleship and Edmunds[11] The patient was a diabetic and an excessive smoker The fields of vision were normal and in each there was a nearly central scotoma for red Death resulted from carbuncle

3 Vossius[11] The patient suffered from alcohol-amblyopia, had at one time a central scotoma, and died hemiplegic and aphasic

4 Bunge[11] The patient was a tabetic and also probably under the influence of tobacco and alcohol

5 Uhthoff[11] (Six cases) The first patient was a chronic alcoholic, with marked blanching of the temporal halves of the papilla, but without record of scotoma, who died from the effects of alcoholism The second was a patient with atrophic discoloration of the temporal halves of the papillæ, absolute central scotoma, who died in an attack of delirium tremens from intercurrent pneumonia The third was a patient with atrophy of the temporal halves of the papillæ, who suffered from delirium tremens succeeded by dementia paranoica and died a lunatic It was not possible to test the visual fields The fourth was a chronic alcoholic who died of meningitis during an attack of delirium tremens No visual fields were obtained, but the temporal halves of the papillæ were atrophic The fifth was a confirmed drunkard, with atrophic papillæ but without demonstrable color scotoma, who died phthisical, and who suffered also from interstitial hepatitis The sixth was a drunkard with atrophic temporal halves of the papillæ without defect in the color fields, who died of pulmonary edema supervening on general paralysis of the insane

6 Wildbrand[12] The patient suffered from polyarthritis and central scotoma which developed suddenly, death resulted from cardiac failure

7 Theodore Sachs[13] The patient was an alcohol-tobacco amblyopic, who had typical central scotomata and who died from intercurrent pneumonia during nephritis

8 Stoltzing[14] The patient was a tobacco-alcohol amblyopic, who died from pleurisy, fatty heart and atheroma of the aorta, scotomata are not mentioned or described

9 Theodore Sachs[13] The patient was believed to suffer from intoxication-amblyopia, although the abuse of alcohol and tobacco was denied He had typical scotomata for all colors on both sides, death from pulmonary tuberculosis

Eight of these fourteen patients had demonstrable central amblyopia and central scotomas Of the remaining six, in one, although the case is described as an intoxication-amblyopia, the scotoma is not mentioned, and in others either it was not present or the patient's general condition was such that it was not possible to demonstrate it In all of these, however, the ophthalmoscopic appearances were those usually found with central scotoma

Alcohol was probably the cause of the optic nerve lesion in seven, alcohol and tobacco combined in two, diabetes and tobacco combined in one, tabes dorsalis associated with the abuse of tobacco and alcohol in one, tobacco was the probable cause in one, although its abuse was denied and the patient died of tuberculosis, in another, although the influence of tobacco and alcohol could not be proved, the clinical symptoms indicated intoxication-amblyopia, and in one the central scotoma existed without such influence Even in those cases in which alcohol seemed to be the most potent agent, the effect of tobacco could not be entirely excluded Finally, it will be noted that all of the patients suffered from various types of widespread disease Therefore we are not actually in possession of the results of an autopsy on a perfectly pure case of intoxication-amblyopia My endeavors to establish toxic amaurosis in monkeys and dogs were failures, probably because the drug was not continued for a sufficiently long time

When, however, a definite set of clinical symptoms are taken into consideration, with the results of autopsies thus far recorded, we have reason to believe that the pathologic process which determines an intoxication-amblyopia is situated in the optic nerve, and especially in that portion which is known as the papillo-macular bundle

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[3] Graefe s Archiv, 1882 xxviii Abth I pp 1 110

[4] Graefe s Archiv 1882 xxviii Abth III p 201

[5] Trans of Ophth Soc of the U K 1881 I p 124

[6] Graefe s Archiv, 1886, xxxii, Abth IV 95 108, and Ibid xxxiii Abth I pp 257 318

Ueber die Gesichtsfeld und Faserverlauf im optischen Leistung s Apparat Halle, 1884

[8] Archives of Ophthalmology 1889 xviii No 2 pp 183 162 and Ibid 1894 xxiii No 4 pp 426-444

[9] Klinische und Anatomische Beitrage zur Intoxikations Amblyopie Inaug Dissert Marburg 1893

[10] Recently Nuel (British Medical Journal Sept 12 1896 p 629) insists that central toxic scotoma is not primarily a neuritis of the macular bundle but a disease of the macula lutea causing degeneration of its cells and that the optic nerve changes are secondary to the destruction of the nerve cells of the macula Some experimental confirmation of this view may be found in the research of Usher and Dean (Ophthalmic Review July 1896) who have observed macular fiber degeneration follow experimentally produced retinal lesions Clinically we know that atrophy of the tissue of the macula lutea e g in atrophic central retino choroiditis will cause ophthalmoscopic quadrant atrophy of the disc As long ago as 1874 Schoen and later Baer and Treitel advocated the retinal origin of central scotoma, believing that it indicated a functional weakness of the center of the retina, due to toxic agents

[11] Loc cit

[12] Bericht über die Versammlung der Ophthalmolog Gesellschaft xxii Heidelberg 1892 p 84

[13] Loc cit

[14] Loc cit

These *clinical symptoms* are as follows Diminution of sight, associated with fogginess in center of field of vision, unimproved by glasses, reduced acuity of vision, which varies from counting fingers to 20–30 (according to Groenouw from 5–200 to 20–30), pallor of the temporal half of the disc, or of a quadrant-shaped portion of the papilla, normal peripheral boundaries of the field of vision symmetrical central color scotomas, especially for red and green, usually oval in shape, stretching from the fixing point to the blind spot and rarely passing much to the nasal side of the former, defective light-sense (Berry, Abney), but according to R Wallace Henry, normal light-perceptive power

Of these symptoms the most important is the *central scotoma,*[15] and did time permit, it would be profitable to study in detail its development, enlargement and retrogression, which, as Groenouw remarks, represent a characteristic picture—a picture, moreover, according to Wildbrand, which is analogous to that produced by retro-bulbar axial neuritis, except that in the latter the defect is absolute

The average size of this scotoma, according to Sachs's measurements of fifty-three fields is out 18 degrees, in 5 degrees, up 7 degrees, down 6 degrees My own average measurements are out 18 degrees, in 3 degrees, up 7 degrees, down 6 degrees It is thus, as we see, an oval with its pointed end toward the blind spot and its blunt end toward the fixing spot, to the nasal side of which it passes only slightly

This scotoma represents a red-green-blind area, and commonly the extent of green blindness is greater than that of red, which in its turn may be surrounded by an area of imperfect color-sense The "culmination spot," or "nuclear spot," to use the phraseology of Sachs, of the scotoma "lies horizontally from 1 degree to 8 degrees in a lateral direction from the fixation point, its breadth, vertically, being mostly below the horizontal line" Sometimes, however, as we know from Groenouw's observations, the beginning is a small, easily overlooked scotoma exactly over the fixing point

When the typical egg-shaped scotoma is developed which, according to Groenouw, results from the union of the scotoma from the fixing spot with a supplemental scotoma around the blind spot, the process may cease, or there may be a stage of progression, characterized by an increase in the size of the color defect, usually above, until it meets the limit of the red field, *i e*, the scotoma has "broken through" If this goes on the patient may eventually resemble a congenitally color-blind person In severe cases scotomas for blue and yellow form in similar manner to the red-green scotomas especially, according to Baas,[16] in the period of "breaking through" Finally, small absolute defects may be found, particularly at the "nuclear spot," but also elsewhere, and in neglected cases, or in those not typically toxic, the scotoma becomes absolute

Instead of the typical egg-shaped or oval scotoma, the visual defect may pass up and out or down and out Occasionally a circular scotoma surrounding the fixing point has been described, for example, by Nettleship, Nelson and by myself

In cases supposed to be more purely alcoholic in origin, either in addition to the relative scotoma for red and green, or instead of it there may be, according to Uhthoff, complete or partial peripheral defects for these colors In rare instances a small central scotoma for blue appears, and exceptionally there are absolute scotomata surrounded by a blue-blind zone and more peripherally by a red-green-blind region, the periphery for white being normal According to R Wallace Henry,[17] if the visual field is full, nicotin is the determining cause of the amblyopia, if spirally contracted (a "retinal exhaustion" field), alcohol is the determining factor A differential diagnosis between alcohol and tobacco cases, based upon the "pericentral" or "paracentral" position of the scotoma, as originally suggested by Hirschberg, has been shown to be inaccurate

The various drugs and toxic substances which may be responsible for the clinical symptoms which have just been detailed are tobacco, alcohol, either singly or combined, stramonium, cannabis indica, chloroform, opium, cocain (?), bisulphid of carbon, nitro benzol, arsenic, lead, iodoform, the toxin of diabetes and probably, according to Baas, ioduret and thiuret, two modern antiseptic preparations

Clinically, at least, tobacco is *facile princeps* of these deleterious agents, although its effect on the system is usually combined with that of alcohol, the relation of alcohol being not only that of an additional poison, but also that of a substance which predisposes the system to the influence of tobacco by depressing nutrition and creating chronic gastritis, because there seems little doubt that the influence of the tobacco is much more potent if the patient is the subject of chronic gastric catarrh Indeed, Horner at one time believed that this was the sole influence of tobacco It did not, according to this author, produce the amblyopia, but it created the nutritive disturbances which in their turn were responsible for the visual defects

Sachs seeks to explain the action of tobacco in relation to toxic amblyopia in the presence of stomachic catarrh by assuming "that certain complex chemic combinations occur chiefly in the stomach and probably result from the transformation of the normal gastric juices into acids of the fatty type, whose compounds with nicotin are either more readily absorbed, or are with greater difficulty eliminated from the system than the simple tobacco bases" There is no doubt that nicotin is neither alone nor chiefly responsible for the deleterious effects of tobacco upon the visual apparatus, or, indeed, upon the nervous centers generally It is not unlikely that the nicotin of tobacco smoke is almost completely, if not entirely, decomposed during the combustion of the tobacco, and we must probably look to other compounds, pyridin, collodin, carbonic acid, etc, for influences which have usually been solely attributed to nicotin

The action of alcohol on the optic nerve is no doubt analogous to its influence on nervous tissue generally and on individual organs, for example, the liver and the kidneys, indeed, we have seen that the pathologic processes are similar

In the absence of microscopic investigations we assume by clinical symptoms that the other drugs in this list produce a papillo-macular scotoma in like manner. Four of them, lead, arsenic, nitro-benzol and bisulphid of carbon, find their chief subjects among workmen who are engaged in handling these substances. Three of them, cannabis indica, chloroform and opium, to which list perhaps stramonium, arsenic and probably cocain should be added, are potent among drug-drunkards. Three of them manifest their deleterious influences chiefly after absorption through the skin, namely, iodoform, ioduret and thiuret, although iodoform may enter the system by stomachic absorption.

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[15] Sachs objects to the designation 'paracentral' or 'central' as conveying a false impression and contends with justice for the term papillo macular scotoma

[16] Das Gesichtfeld Stuttgart 1896, p 164

[1] Ophthalmic Review, xv, No 172 1896

With the exception of cannabis indica, stramonium, opium, cocain (?), iodoform and perhaps some of the cases of bisulphid of carbon and nitro-benzol poisoning, the clinical symptoms of the visual defects of this list of substances are more analogous to those of an axial neuritis than of pure intoxication-amblyopia. This is notably the case with lead.

The prognosis of toxic amblyopia is favorable when only a color scotoma exists and recovery is probable as Groenouw points out, even when small absolute defects are present. In the earlier stages, especially of the tobacco cases, the indications are rather of vascular disturbance than of true neuritis, or perhaps, as Sachs points out, the alterations do not at first affect the nerve fibers, but merely the areolar septa. The nervous tissue is temporarily injured, and cure is therefore possible. When optic nerve atrophy ensues, we may assume a real retro-bulbar neuritis. Nevertheless there appears to be a type of optic nerve atrophy in which, as Lawford[15] has said, although tobacco may not be the sole cause, it has some share in originating or aggravating the changes in the optic nerve, or, again, as Browne[16] has suggested, "there are cases of retro-bulbar neuritis which begin with the ordinary clinical symptoms of intoxication-amblyopia, but which do not tend to recovery, the progression of the central scotoma indicating that atrophy of the papillo-macular bundle takes place. What is the rôle played by tobacco and the other agents thus far mentioned in these cases has not been positively determined. No doubt recovery or progression of the visual defect is largely determined by the length of time during which the poisonous substance has maintained its influence as well as by the type of the lesion which it produces as we shall see in the subsequent sections.

2. Progressive and scotomatous atrophy of the optic nerve the result of toxic agents.—The class of

but gradually spreads until the whole nerve is more or less involved and atrophy results. Here a distinct personal proclivity is shown in young persons, members of the same family. Whether there is any ascertainable difference between those cases in which tobacco is the exciting cause and those which occur spontaneously requires investigation." They are probably analogous to the progressive scotomatous atrophy which Jenson[1] has described and which has been regarded by him and by others as a particular form of the development of tabetic atrophy. As has been said before, the relation of toxic substances to this form of optic nerve atrophy is uncertain, but a few cases seem to indicate that they may be at least exciting causes. Of those agents already mentioned, tobacco and alcohol are probably preëminent, lead less certainly. Of the others I am unprepared to speak.

3. General atrophy of the optic nerve the result of toxic agents.—General atrophy of the optic nerve as the result of toxic agents may be divided thus:

1. Those cases in which there is a preceding retro-bulbar neuritis or neuritis papillo-macularis, with central scotoma, and in which the diseased process has spread from the papillo-macular bundle and the axis of the optic nerve until it has involved the peripheral and intermediary fibers. To these cases I have already referred in the two preceding sections, and have pointed out that they probably may be due to tobacco and more certainly to alcohol and lead. To this class I may add bisulphid of carbon and probably arsenic.

2. Those cases in which there is a preëxisting intra-ocular optic neuritis, usually of moderate degree, which is succeeded by an ordinary atrophy, that is, a post-papillitic atrophy. Scotomata are not present in these cases.

The most prominent drugs responsible for this state of affairs are bisulphid of carbon (probably), mercury, iodoform (one case only), and especially lead. Exceptionally subjects of chronic alcoholism exhibit optic neuritis. The same is true of patients who are subjects of the chloral habit. Of all the drugs mentioned the most potent in this relation is lead. For example in sixty-four cases which I have analyzed there were thirteen with optic neuritis, four with neuro-retinitis and seventeen with optic nerve atrophy, while in seventeen cases the patients were stated to be blind without description of the ophthalmoscopic appearance, and no doubt in many of these atrophy or neuthat this visual defect is possible under the influence of chronic mercury, chronic arsenic and especially chronic lead poisoning Referring to the latter I may say that there is certainly an optic nerve atrophy due to the primary effect to lead on the visual apparatus, an atrophy which has been believed by some observers, for example, Parisotti,[23] to be due to changes which lead causes in the nutrient arteries of the optic nerve, changes which we know it may cause in the general retinal circulation

It is probable also that atrophy may occur under the influence of nitrate of silver, in a manner analogous to lead and bromid of potassium It certainly results from the toxic influence of filix mas, although thus far reports of this condition are largely confined to Japanese literature A few cases, however, have appeared in French and German reports, and recently filix mas atrophy has been attributed to filicic acid, Van Aubel[24] believing that this agent acts upon the central nervous system, the spinal cord and the sympathetic, causing dilatation of the pupil and through the vaso-motor nerves contraction of the retinal arteries It is interesting to observe that the blindness comes on acutely, generally after the ingestion of the drug for the purpose of driving out intestinal parasites and that within a few weeks or even shorter time, the arteries shrink and the discs become pallid and atrophic

In this particular the drug may be classed with two others that are able to produce what I may call an acute *optic-nerve atrophy*, namely, quinin and salicylic acid, or to speak more accurately, various preparations of the cinchona bark, and the salicylates The last named drugs, namely, quinin and salicylic acid, produce symptoms so exactly alike that they may be classed together, although the effect of quinin is much more potent than that of salicylic acid

The symptoms are as follows Blindness, complete or incomplete, usually developed with great suddenness and more absolute than in any other recoverable condition (Mellinger and Browne), dilatation of the pupils, absence of the light reflex, imperfect response to accommodative effort, nystagmus, proptosis, occasionally divergent strabismus and increased intraocular tension (Tiffany), anesthesia of the conjunctiva and cornea (Voorhies), extreme pallor of the optic discs and diminution of the retinal vessels simulating the appearances of progressive atrophy, occasionally retinal haze and the cherry-colored spot in the macula, resembling embolism of the central artery of the retina, gradually partial or complete restoration of the central vision, associated at first with complete or partial color blindness, later slow renewal of the color-sense, which may ultimately return, more often permanent diminution of the light-sense and color-sense and contraction of the field of vision, the contraction usually assuming an elliptical shape, very exceptionally permanent blindness (Claiborne)

As we know from the experiments of H Brunner[25] and myself,[26] as well as from those of a recent Italian observer, De Bono,[27] the exact picture of quinin blindness may be repeated in animals, so that there is do doubt as to a selective influence of this drug upon the visual apparatus—an influence, as I have shown in dogs, which extends from the intraocular end of the optic nerve throughout the visual tract as far as this can be traced in the brain But, even now, the mechanism of the blindness is somewhat uncertain Probably it depends upon an influence of the drug on the peripheral circulation of the visual apparatus, which produces at first a pure ischemia, later an endo-vasculitis, and still later, as I have further shown, thrombosis in the vessels and extensive secondary degenerative changes in the optic nerve fibers

Parisotti's idea of the mechanism of primary lead atrophy, to which I have already referred, is similar, namely, that it depends upon changes in the nutrient arteries of the optic nerve Indeed, the analogy does not cease here, because referring to Sachs's observations on intoxication-amblyopia pure and simple, we remember that he suggests, and in fact demonstrates, that vascular changes in the diseased tissues of tobacco-alcohol atrophy, producing proliferating endo-phlebitis and leading to connective tissue obstruction of their vascular lumen, are important factors in the anatomico-pathologic basis of this affection

4 *Atrophy of the optic nerve secondary to retinal and other lesions, in their turn the result of toxic agents* —Thus far we have discussed the visual defects caused by an action of toxic substances falling primarily upon the papillo-macular bundle and ceasing at this point, or spreading and involving other tracts in the nerve, or by an action on the entire optic nerve, preceded or not by an intraocular optic neuritis In a certain number of instances atrophy of the optic nerve is secondary to lesions either in the retina itself, or elsewhere in the body The cases may be divided into

1 Those in which the action of the drug has fallen upon the retinal circulation

Preeminent among substances of this character quinin and salicylic acid should be placed, that is, they should be thus placed if we accept the theories of certain observers in regard to their action, namely, that it is upon the retinal vessels, causing endo-vasculitis and secondary changes My own observations indicate that they affect the vessels of the optic nerve apparatus especially—perhaps, however, an extension of the original retinal lesion

2 Those cases in which the toxic agent has produced tissue change, either in the retina or in the retinal vessels

Preeminent among drugs of this class is phosporus, which early in its toxemia causes retinal hemorrhages and later a fatty degeneration of the retinal tissue itself, which, should the patient live long, would no doubt produce secondary changes in the optic nerve Probably other poisons, chiefly irritant in their effects, have an analogous action, notably the bichlorid and other soluble preparations of mercury The influence of acute poisons upon the retina and the secondary changes in the optic nerve require further investigations If subsequent investigation substantiate the view that toxic scotoma is caused primarily by degeneration in the macula, tobacco and alcohol would find place in this class

3 Those cases in which the primary action of the poison falls upon some organ or tissue of the body, causing a disease which in its turn is responsible for a retinal and secondary optic nerve change

The most notable drug of this class is lead, which, as we know, may produce a nephritis, a neuro-retinitis as the result of this nephritis, and finally optic nerve atrophy Lead, in like manner, may produce an encephalitis, or a meningo-encephalitis and secondary optic nerve changes The effect of alcohol upon the meninges of the brain, causing optic neuritis and secondary atrophy, has already been described Whether the optic neuritis of chloral, mercury, arsenic and nitrate of silver may have a similar origin, I do not know It seems probable that iodoform may cause meningo encephalitis and optic atrophy

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[23] Rec d'Ophth, 1885 3 s, vii, p 350
[24] Annales d Oculistique, T 114, 1895 p 400
[25] Ueber Chininamaurose Inaug Dissert Zürich 1882
[26] Trans Amer Ophthalmological Soc 1891
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OPTIC NERVE ATROPHY OF OBSCURE SPINAL ORIGIN

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The important relationship existing between the optic nerve and other portions of the central nervous system, especially the spinal cord, has long been recognized by both neurologist and ophthalmologist In fact, most clinical observers will readily agree with Gowers,[1] in considering the optic nerve in its development, nothing more than an extension of the central nervous system and anatomically of the same structure as the brain and spinal cord The pathologic relationship between the diseases of the optic nerve and cerebrum are not so difficult of demonstration, but when we consider this same relationship in diseases of the spinal cord, pathologists must as yet acknowledge their inability to discover any direct anatomic connection

The portion of the subject allotted to me is not the discussion of diseases in general of the optic nerve, which are dependent upon, or associated with pathologic conditions of the spinal cord, but the consideration of those cases of optic nerve atrophy, only, which bear this relationship to well recognized lesions of the spinal cord I say "associated with" because no casual dependence has as yet been anatomically demonstrated, but because we observe clinically an atrophy of the optic nerve, and at the same time certain pathologic lesions of the spinal cord we are in the habit of trying to trace some casual relationship Clinical facts can not always be explained by theoretical reasoning or absolute anatomic demonstration, yet we learn to class them as truths, because of their frequent occurrence under almost identical conditions

Most writers divide atrophy of the optic nerve into two classes *a*, primary, *b*, secondary In primary atrophy disturbance of vision is usually present with the beginning of the atrophic process, both increasing together, while in the secondary form there may be a disturbance of vision long before there are any appearances of degeneration or atrophy in the nerve substance itself, but it is doubtful whether the final appearance of these disks can differentiate the two classes Primary atrophy occurs most frequently without any discernible cause, yet sometimes is distinctly traceable to heredity In this form of atrophy previous inflammatory signs never exist

By secondary atrophy is meant those cases in which the morbid condition may be traced to distinct causes as for instance those following intrabulbar neuritis or choroiditis, ultro-bulbar neuritis, traumatism and direct extension of the process from the cerebrum itself

Atrophy of the optic nerve occurring in this connection with simultaneous lesions of the spinal cord presents the clearest example of the so-called primary atrophy

To aid us more clearly in this discussion, I propose to treat the subject under the following three captions

1 Optic atrophy associated with lesions of the spinal cord and bulb, as

a *Meningitis*—Optic nerve atrophies resulting from or following an acute inflammation (meningitis) of the meninges or nerve substance proper (myelitis) of the spinal cord and medulla, must be classed as consecutive, instead of primary Such could only occur as the extension of the inflammation from the spinal cord to like structures in the brain, with a simultaneous involvement of the optic nerve Cases of this kind are exceedingly rare

Gowers[2] mentions a case of the optic atrophy following an attack of sporadic cerebro-spinal meningitis A boy was brought to him, who after a thorough drenching had suffered from severe headache, delirium, fever and stiff neck Ten days later he became blind After the blindness, the other symptoms disappeared, and when examined by Gowers there was present only a small degree of light perception in one eye The papillæ showed the picture of consecutive atrophy, the centers being filled with new connective tissue, the vessels were narrowed, and the choroid in the neighborhood of the papillæ showed marked changes This author has mentioned two other cases of the optic atrophy following myelitis of the cord which were reported by Clifford-Allbut In one there was a slight optic neuritis, with indistinct borders of the papillæ, resulting finally in a gray atrophy, and in the second a partial gray atrophy the cause of which being, probably, a chronic myelitis of the cord of the dorsal region

A very interesting case has been reported by Dreschfeld[3] He had under his care a man 24 years old, who with the simultaneous development of double optic neuritis, which led to complete atrophy, developed symptoms of acute myelitis, from which he died in one month The autopsy showed acute disseminated inflammation in the dorsal and lumbar region of the spinal cord The brain appeared perfectly normal

b *Locomotor ataxia*—The association of optic nerve atropy with tabes dorsalis has been recognized as an early symptom of this latter disease for many years A new impetus was given to the study of this associated pathologic condition by Smeichler,[4] who in 1893, published the result of his studies in a large number of cases found in Professor Alt's clinic at Vienna, and called attention to optic nerve atrophy as an initial symptom of beginning tabes Such cases of optic nerve atrophy occurring in this connection must be classed as primary, for the ocular symptoms, as a rule, always precede any final manifestation of the disease, and there is never any history or signs of a previous neuritis In fact, some observers, especially Charcot, have held that all cases of primary optic nerve atrophy are associated with tabes of the cord, and that, although the spinal symptoms may not be present at the time, they will appear at some period during the patient's life

On the other hand, Uhthoff,[5] with whom Gowers agrees, holds that in only half of such cases [illegible] there ever any affection of the [illegible] A[illegible] to

Galezwoski[6] about two-thirds of all optic nerve atrophies are tabetic, while Pelteshon[7] found still higher percentage, namely seventy-eight out of ninety-eight cases

The converse of this question, namely, in what per cent of cases of tabes is optic nerve atrophy present, is not so easily answered Gowers[8] remarks that we are very near the truth when we say that out of every six cases of tabes, one will suffer from optic atrophy Among seventy cases which he observed in succession, of persons suffering from locomotor ataxy, only nine had optic nerve atrophy Voights[9] among fifty-two cases found atrophy nine times, while Erb[10] among fifty-six cases, found atrophy seven times

From the study of this subject, it will be seen that nearly all cases of primary atrophy of the optic nerve are associated with tabes of the spinal cord and that this association with other sclerotic processes in the cord is very insignificant in comparison That the one is dependent upon the other is not probable, but my own observation leads me to believe, that since the two processes are degenerative in character, it is simply fortuitous as to which part of the nervous system is first attacked

Gunn[11] has very thoroughly studied these points and very properly raises the question as to the existence of independent changes in both the spinal cord and the optic nerve

As Gower says, "the pathologic relationship between optic nerve atrophy and individual lesions of the spinal cord is yet dark The fact that the atrophy can be very far advanced in tabes when the changes in the cord itself are, as yet, in the very first stages makes it probable that the changes in the optic nerve are associated with, rather than a result of the spinal cord lesions "

That there is a close relationship, all must admit, but no postmortems have shown any direct anatomic connection

Knies[12] says that the process in the optic nerve begins as a disseminated one, and that the atrophy extends in an ascending or descending direction The middle fibers of the nerve remain longest intact, and we may, therefore, infer an action starting from the periphery This may take place most readily at the place where the nerve passes through the unyielding optic foramen

The gray atrophy is also noticeable in the chiasm, tractus, and as far as the primary optic ganglia, but there is no direct connection with the degeneration of the spinal cord

Pathologic anatomy has not demonstrated the truth of the statement made by Landois and Stirling[13] that "the discovery of the partial origin of the optic nerve from the spinal cord, explains the occurrence of the amblyopia (with partial atrophy of the optic nerve) in disease of the spinal cord and especially in tabes " The only connection between the eye and spinal cord is found in the sympathetic nerves, which come from the cilio-spinal center in the cervical region of the cord, and whose connection with the iris is such that their stimulation will produce a dilation of the pupil But this connection is anatomically so slight that it would be a matter of impossibility to imagine a process reaching the optic nerve from the spinal cord by means of this route A most excellent summary of the views at present held were given by Gowers,[14] in opening a discussion upon "Eye Symptoms in Diseases of the Spinal Cord before the Ophthalmological Society of the United Kingdom '

This writer holds that optic nerve atrophy and internal ocular paralysis must be regarded as associations, not an effect of spinal lesions Because 1 Diseases of any nature may exist in any part of the spinal cord without occurrence of ocular symptoms, if we except rare paralysis of the dilators of the pupil in disease of the sympathetic tract in the cervical region 2 The ocular symptoms which may be absent when the cord disease is advanced, may exist in an extreme degree, when such disease is in a very early stage 3 With the single exception of the sympathetic symptoms just mentioned we know of no anatomic mechanism by which the spinal cord can produce the ocular symptoms

What is true of tabes is essentially true of other sclerosing processes in the spinal cord It matters not whether the atrophic or sclerotic process commences first in the optic nerve or spinal cord, this one fact remains clear that the pathologic processes show some similarity in character These associated ocular symptoms are the results always of degenerative processes, and their presence shows that the cord disease is essentially degenerative in its nature This is made evident in the slow progressive character of the spinal symptoms

The researches of Pierret, confirmed in part by Dejerine and anticipated partly by Westphal, have enlarged and altered our conception in regard to tabes dorsalis, which, in some measure, throws a ray of light upon the association of this malady with optic nerve atrophy

Pierret has shown that degeneration in the optic nerve is not the only peripheral lesion and that the same in the cord is not the only central change in the disease Often there is independent degeneration in the cutaneous nerves, commencing in their extremities, to which the optic nerve change is analogous There may be degeneration at the central termination of the optic as well as other cranial nerves, analogous to that in the posterior columns of the cord He terms it "wide sensory neurosis "

What has been said applies not only to tabes in particular, but to all morbid conditions of the spinal cord presenting degenerative changes in the nerve structure

Ocular symptoms, especially optic nerve atrophy, have long been a diagnostic sign in spinal cord lesions, especially tabes So frequently is this association present that clinicians are in the habit of associating all primary atrophies of the optic nerve with similar degenerative processes of the cord From what has been said it is evidently improper to speak of optic nerve atrophy of spinal origin, unless we mean its origin is from the same source, as is the associated lesions in the spinal cord

The symptoms of optic nerve atrophy associated with tabetic changes in the cord are said to be very characteristic, which is true when they all exist, but there are many cases of atrophy where only two or even one diagnostic sign is present, as, for instance, in those cases of slow development of the ataxic symptoms, and in such cases one can not positively recognize such associated pathologic changes

The appearance of the disc in the optic atrophy occurring in connection with tabes, is said always to be of a characteristic gray color instead of white, and this discoloration of the disc has been frequently commented upon by various writers Especially is the color gray, or pearly white by the indirect ophthalmoscopic picture, while by the direct it is gray or mottled, presenting sometimes according to Gowers, "a peculiar gelatinous opacity." Yet he who would make a diagnosis solely through the color characteristics of the disc will often err, for I have seen true cases of tabetic atrophy, where the appearances much more resembled the whitish than a grayish tint, and for that reason I fully agree with Dr. Young, who says that there is always a possibility of inaccuracy since expert ophthalmologists may honestly differ in the question of definite color. Furthermore, Gowers has called attention to the fact that gray atrophies occur under other pathologic conditions, as, for instance, in consequence of the post orbital pressure upon nerves already atrophic from other causes than tabes.

The histo-pathologic changes in this form of tabetic atrophy have been thoroughly studied by Uhthoff, Gowers and Leber. According to the latter author, the microscopic appearances in the nerve show an increase in the interstitial fibers and sometimes a formation of transparent cell bodies around the vessels and at the same time atrophy of the nerve fibers. Another point which is noted in this form of atrophy is the normal caliber of the blood vessels especially the arteries, which in other forms of white atrophies are usually smaller in size. This, according to Knies, is due to the fact that the original process is located behind the entrance of the central vessels. But, according to my experience, this picture is not universally present, the conscientious ophthalmologist must be prepared for deviations on this point. The disturbance of vision which occurs in connection with tabetic atrophy, for both form and color, is another important symptom. It has been especially noted that the ophthalmoscopic picture is no criterion for estimating this disturbance of sight. Cases are sometimes seen where the disc is atrophic throughout and yet there is but a slight diminution in the vision, while even in the majority of cases atrophy appears before there is any disturbance of this function whatever.

Yet another symptom, perhaps the first, is the contraction of the field of vision for both color and form, this contraction following in this order, green, red and white, until there is a total achromatopsia. The field of vision for both form and color is a concentrically narrowing one, progressing gradually until there is a very narrowed, central circle remaining, corresponding perhaps to merely the point of fixation and this gradual narrowing may continue for years before there is total loss of vision, and before the patient is aware of the diminution of sight. This loss of vision is very gradual and slow, and such cases as the one reported by Hirschberg,[1] where vision was almost entirely lost in eight weeks, are extremely rare. Knies[16] says that, prognostically, the color disorder is important, because those cases in which the color boundaries are very much narrower than those for white belong to the rapidly progressive cases.

A central scotoma in this form of spinal atrophy is extremely rare and when it does occur should, according to certain writers[1] excite a suspicion of other spinal lesion than tabes. The "Argyll-Robertson pupil," or one which responds to accommodation but not to light, has to me proven of more value in substantiating the correct diagnosis of this disease than all others, and this symptom will exist even in the very latest stages.

Many writers say that a contraction of the pupil is an early symptom of tabetic atrophy, calling it a "spinal myosis," but my observation leads me to consider this sign as exceedingly transitory, finding as a rule, mydriasis rather than the opposite. A much more constant symptom is the inequality in size between the two pupils and which is far more pathognomonic than a myotic condition. One question in connection with this subject is whether a primary gray atrophy will always be followed later by the ataxic symptoms of tabes, as is held by some writers. This is a question most difficult to answer, because of the time which may elapse between the appearance of the optic atrophy and the tabetic symptoms. In the majority of cases it is a matter of great difficulty to keep patients under close observation for long periods of time, hence it is that a statistic report is difficult to obtain.

Kahler has reported a case where atrophy existed seven years, Charcot, a case where it existed ten years, and Gowers one of fifteen and twenty years before there was any marked tabetic symptoms. I deem it unnecessary to report here the histories of cases of this affection, because cases of optic nerve atrophy in association with tabes dorsalis are by no means infrequent, and none of those which have come under my observation presented any symptoms which are not common to all such cases. The prognosis in such cases of optic nerve atrophy is bad and we have yet to find the remedy which will benefit them.

c. *Multiple sclerosis.*—In this affection it is a matter of impossibility to consider the pathologic process as confined exclusively to the spinal cord, for it is well known that the sclerotic process is liable at the same time to involve any portion of the cerebro spinal system, and rarely is there a limitation to one particular part. Hence, when optic nerve atrophy does occur simultaneously with insular sclerosis in the spinal cord the same sclerotic process will be found also in the brain substance. My colleagues will no doubt call your attention to this point when discussing the brain lesions, for with the majority of writers multiple sclerosis is more frequently spoken of as brain than as spinal lesion.

The observations of Buzzard[18] do not agree with the majority of writers, when he says that atrophy of the optic nerve is most frequently associated with insular or disseminated sclerosis, next frequently in connection with fasciculated sclerosis of the posterior columns (in tabes and general paralysis of the insane), and least often with fasciculated sclerosis of the lateral columns.

According to Knies, pronounced atrophy of the optic nerve in this affection is rare, about 3 per cent., incomplete or partial atrophy about 19 per cent.

Gowers says that atrophy occurring in this connection is very similar to that occurring with tabes, and until the ataxic symptoms appear the diagnosis is somewhat difficult. In pure insular sclerosis of the spinal cord he has never seen optic nerve atrophy occur but three times.

d. *Lateral sclerosis.*—This pathologic condition constitutes the last of the chronic sclerotic conditions of the spinal cord with which atrophy of the optic nerve is sometimes found associated and likewise the most infrequent.

Gowers has never seen this associated symptom but twice in all his vast experience. Such would naturally be expected, since many cases diagnosed as lateral sclerosis have been found, postmortem, to be due to some other lesions, hence the nervous organic lesion must be accurately diagnosed first before we can associate it with optic nerve atrophy The same writer above referred to has reported a case of combined sclerosis of the posterior and lateral columns, with gray atrophy of the optic nerve and bilateral oval central scotoma especially for red and green This latter symptom is held by some, as before mentioned, to be a differential sign between optic atrophy associated with tabes and other pathologic lesions of the cord

e *Injuries of the spinal cord* —As we progress still further into the pathologic changes of the cord with which optic nerve atrophy is associated, we are confronted at every turn by a yet wider obscurity in connecting the two lesions

There was certainly no necessity for the use of the word "obscure" in connection with this subject under discussion to-day, for as soon as one begins to study the literature of the subject and his own personal experience, he is confronted on all sides by nothing but obscurity There have been a few cases of optic nerve atrophy reported, which occurred at the same time or some time after an injury to the spinal cord, hence it was natural to consider the atrophy somewhat in the light of a *propter hoc* Ever since Erichsen gave to the medical world, and now the special property of the legal profession, his brochure upon "Spinal Concussion," this subject of spinal injury or "railway spine" has been a fruitful field for a large amount of medico legal harangue

Injuries may occur to the spinal cord without any discoverable injury to the vertebral column (concussion), yet when this latter is involved we can much more readily discover the relationship between the seat of injury and the spinal symptoms In this, as in all pathologic conditions of the cord, if optic nerve atrophy should arise it must be looked upon simply as an accidental association, not in any causal relation, since, as yet, no anatomic connection has been found to exist

Wharton Jones states that affections of the optic nerve are frequent after injuries of the spinal cord, but fails to add that atrophy as one of these is exceedingly rare What changes do occur, especially in cases of concussion, are referable to changes produced in the sympathetic system, which presides over the vaso-motor functions of the body

Fowler[19] has reported the case of a man who was thrown from a caisson during the war and was run over, the wheel passing over the lower portion of the dorsal region The lower extremities were paralyzed for a few months His back rendered weak, he perspires freely and his face flushes easily, no suspicion of syphilis Sight failed gradually from optic atrophy of both eyes and vision was finally lost altogther

Caries of the vertebral column is but another form of injury when it involves the cord Abadie[20] has published a supposed case of caries of the vertebral column at the base of the skull, which was accompanied by atrophy of the optic nerve together with a meningitis So far, I have been unable to discover in literature any trustworthy cases of optic atrophy where such a casual relationship could be found, as injury to the spinal cord

f *Trophoneuroses* —Under this head medical literature does not afford us many cases of associated optic atrophy, and I have been unable to find but one authentically published case This was "A Case of Acromegaly, with Atrophy of both Optic Nerves" reported by Dr George Carvell[21]

Male, aged 52, carpenter Father died of old age and debility, while mother died of pulmonary disease None of patient's relatives had similar conditions to his own

History Up to twenty years ago patient had enjoyed good health, and between the ages of 20 and 30 was able to wear No 8 glove When about 30 years old he began to grow stout and suffered from general weakness He still continued to work until his sight began to fail Five years ago he was unable to read a newspaper, and from that time has become worse During the last few years has suffered from shooting pains in the arms and legs, especially in hip, knee and ankle joints, complains of coryza *Present condition* Is of medium height, corpulent, and clumsy in movements, pallor of face and lips, nose is large, malar bones prominent, occipital tuberosity and lower jaws are unusually developed, the latter protruding in front of upper jaw, internal organs healthy, urine, orange color, specific gravity 1030, urates in great abundance, no sugar or albumin Eyes pupils of equal size and react to light and accommodation, right eye vision=6-60, left eye vision=fingers at one meter, no improvement with glasses Ophthalmoscope=marked optic atrophy in both eyes, discs milky, edges sharp and defined, fields laterally diminished, especially in right eye Color Distinguishes blue and green, calls red and yellow buff

2 Optic nerve atrophy occurring in connection with diseases of the peripheral nerves —According to Knies, diseases of the peripheral nerves rarely affect the eye unless they belong to that organ, or are adjacent to it In multiple neuritis an optic neuritis sometimes occurs, but no cases of optic atrophy have been reported where a causal dependence could be found In the medulla, cases have been reported where there occurred optic atrophy at the same time or following certain affections of the peripheral nerves, which have their nuclear origin from this source In chronic bulbar paralysis, changes in the optic nerve, while sometimes occurring, are very rare Galezwoski has observed and reported a case of one sided optic atrophy which occurred in connection with a chronic progressive paralysis of the bulbar nerves Robin cites a very interesting case from Von Dianaux, where a rapid atrophy of both optic nerves appeared in a man 76 years old, who was suffering from a deep affliction It was also accompanied by a paralysis of the sixth nerve The vision was entirely lost in two months, yet, when he was again seen some time later, the vision had increased even to one-tenth

A full history of double optic atrophy in connection with bulbar paralysis is reported by Drs J W Barrett and P S Webster of Victoria, Australia

E C, aged 30 Symptoms began three years ago with drooping of the left lid and turning outward of the eyeball When first seen six months ago the following conditions were present Right eye, pupil 6 millimeters, does not react to either light or accommodation, no external ocular paralysis Vision=5-60 Emmetropic, optic disc very pale from primary atrophy Left eye, pupil 7 millimeters, no action to light or accommodation, paralysis of internal and inferior rectus, weakness of superior rectus Vision=fingers at two feet, contraction and loss of color vision, at present fields are much smaller Right eye vision=5-60, left eye vision=light perception, paresis extended to internal rectus and superior rectus in right eye and has increased in the muscles of the left supplied by the third nerve

Patient's general health good and he has no other spinal symptoms At one time he suffered from headaches and has had a little rheumatism Seventeen years ago had a chancre and was treated two months No secondary symptoms

Diagnosis —Atrophy of optic nerve and independent specific nuclear affection of the nerves implicated

Through the kindness of Dr H V Würdemann I am enabled to report another very interesting case

T G, aged 38, hack driver Presented himself on account of a nervous trouble in both eyes

Examination —Right eye vision=5-12, left eye vision=5-12, total paralysis of third nerves, except the branch going to levator palpebræ sup The perimeter showed lateral (homonymous) hemianopsia for form and for white, red and blue There was total achromatopsia for green By ophthalmoscopic examination the optic discs were white and atrophic, especially the macula fibers Syptoms of multiple sclerosis were present also in other organs

Leaving now those pathologic conditions of the spinal cord and medulla, where distinct anatomic changes could be discovered we come to the third division of our subject and that portion enveloped still farther in the domain of obscurity

3 Optic atrophy associated with functional neuropsychoses such as hysteria, chorea, etc —It may be questionable whether the discussion of this last division belongs properly to the domain of the spinal cord, but since the symptoms of those diseases classed under the head of "neuropsychoses" manifest themselves most prominently in those portions of the body whose activity are dependent upon their relationship to certain nerve centers in the spinal cord, it seems but proper that the spinal cord should take a more prominent position than any other portion of the cerebro-spinal system

Most of the functional neuroses are still enveloped in obscurity, and since the etiology of the diseases themselves are still a matter of dispute, it is but natural to suppose that any association of optic nerve atrophy with the same affections should be still further beyond the reach of even theoretic reasoning

a Hysteria —In this disease we all know of its multiform symptoms and of the appearance occasionally of various ocular manifestations I have been unable to find any authentic case of optic atrophy whereby a relationship of the two diseases could be established, and Gowers says that in one or two cases of hysteria optic atrophy has been observed, but that its presence was probably purely accidental, or there existed at the same time some organic disease, as disseminated cerebro spinal sclerosis In fact, in all functional nervous troubles any appearance of optic atrophy can not be regarded as anything but accidental and not causal

Weir Mitchell,[24] in narrating a case of tabes in a child, calls attention to the fact that in hysteric ataxy, in contradistinction to the congenital forms, both optic discs are gray, the arteries too small, the veins and pupils normal, the red and blue fields typically reversed and fields for form contracted

Buzzard[18] calls attention to the fact that contracted normal fields should make us hesitate in diagnosing "hysteria," even though there are no appearances of atrophy of the optic nerve, for often in such cases a change in the nerve, which ultimately ends in atrophy, will subsequently show itself

On the other hand, Leber[23] has found objective changes in the optic nerve in amblyopia with concentric narrowing of the field, which, according to Charcot, is characteristic of hysteria These changes were found, by postmortem and microscope, to consist in an occasional atrophic process in some bundles of the optic nerve fibers in front of the chiasm, indicating that the process was peripheral, yet, so far, no case has been reported where a complete atrophy of the optic nerve was present In Leber's case the optic nerve appeared perfectly normal to the naked eye

b Chorea —The pathology of this disease is still a matter of dispute Various anatomic lesions have been found associated with this disease, but its nature is still a matter of dispute According to Germain Sée and many others, it has a rheumatic basis, while Joffroy holds it to be in the cerebro spinal system and is unconnected with rheumatism The connection between chorea and heart disease has been frequently noted, hence some consider those cases of optic nerve atrophy which are found associated with chorea to be dependent upon emboli of the vessels of the optic nerve

A few cases of optic nerve atrophy occurring in persons at the same time or previously suffering with chorea have been reported From one of the assistants in the neurologic department of the Manhattan Eye and Ear Hospital I have ascertained that the percentage of optic atrophies in true cases of chorea is about 1 in 250

Such cases as have been reported have all been due to an embolus in the central artery of the retina, hence must be traced back to some probable organic disease of the heart An interesting case is reported by William George Sym[26]

B M , boy, aged 17, came to Royal Infirmary complaining of loss of sight in right eye History Had perfect vision up to ten years ago, at that age he had an attack of chorea He made a good recovery from this until one morning, when he felt a sudden mist come over the right eye At that time he was walking, never received any blow or injury near the eye nothing unusual in family history, neither parent is rheumatic, but one brother was said to have had articular rheumatism Examination Left eye vision=20-20, right eye vision=0, no perception of light, right eye does not converge on fixing a near object, pupil does not contract to light, tension normal Examination by ophthalmoscope Right eye presented absolute atrophy of optic nerve, disc being dead white, blood vessels extremely small, no traces of hemorrhage and exudation, and disc, in which cupping of optic atrophy was well marked, was normally regular in outlines, macula normal, choroid coat apparently normal, no staphlyoma Left eye normal in appearance, evidence of stenosis in mitral valve

Conclusion Atrophy of right eye due to embolus plugging arteria centralis retinæ of that side and thus cutting off blood supply to retina, this having occurred during the attack of chorea at the time he felt the mist over his eye

Atrophy following neuritis almost invariably affects both eyes, though one nerve may be more advanced than the other Here we have atrophy of one, associated with a normal condition of the other In children, bilateral simple atrophy is rare and so is neuritis, unless dependent upon some gross brain lesion Dr Sym mentions the fact of Gowers having said that there is on record only two cases of embolism of the arteria centralis retinæ occurring in consequence of chorea However, Argyll-Robertson has mentioned a similar case occurring in a young lady, so that I am confident that there probably exists other cases which have never been reported In the study of any subject one must be content with such published reports as can be found in the literature, in hopes that by the publication of these and his own personal experience, others may be brought to light which have been resting in obscurity

In idiopathic epilepsy, where many of the symptoms of this disease show some involvement of the spinal cord I have been unable to find any reported cases of associated optic nerve atrophy, although other changes, such as hyperemia, anemia, narrowing of the blood vessels, edema, etc , of the optic disc have been noted by various observers In general paralsis of the insane, which involves the whole cerebro spinal system, changes in the optic nerve of various kinds have been noted, [illegible] a [illegible] them atrophy Bullard,[18] in 400 [illegible] tion, found complete blindness only three times This was due to a gray atrophy of the optic nerve, similar in all respects to that found in tabes, and hence the causative relation bears the marks here as in tabes In forty-seven cases Jehn[27] found marked atrophy seven times, in three the atrophy was double, while in four it was only on one side Writers also hold that a slight degree of atrophy with amblyopia is still less frequently observed than complete atrophy

Galezwoski,[30] in forty-eight cases, has only observed beginning atrophy once, while Boy has observed it four times among eighty cases, which were thoroughly examined

In this affection, as in tabes, it has been noted that the signs of atrophy may appear some time before the symptoms of general paralysis, and Magnan mentions the fact that he has observed these changes two to four years before the other symptoms appeared

In conclusion would say that it is entirely unnecessary for us, in considering this subject, to qualify the term "obscure," for with all our advancement in pathologic anatomy we are as yet unable to trace the casual relationship of many cases of optic nerve atrophy, and especially is this true when we recognize that this atrophy is in some mysterious way connected with lesions of the spinal cord

Experience and the microscope teach us that certain well defined chronic lesions of the spinal cord are more usually associated with atrophic changes in the optic nerve than certain others, but the *raison d'être* is not yet within the confines of our knowledge Much original investigation can yet be made in trying to extend our knowledge of the subject

The reports of clinic cases, especially those seemingly of spinal origin or relationship, will add much to a more thorough comprehension of the subject, and especially with minute postmortem examinations will be of much substantial value

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Loretin versus Iodoform—The comparative results in the treatment of suppurating surfaces are stated by Dr W O Green as follows 1 Loretin is without odor 2 It is slightly more stimulating, and causes more pain perhaps when first applied, but is shortly followed by more permanent analgesic effect 3 It has greater antiseptic properties and on this account, limits and then diminishes more rapidly the local inflammatory condition 4 The process of granulation is more rapid and more perfect 5 The local alterative effect is greater, and therefore the part requires less supplementary treatment in the way of local applications 6 The discharge diminishes more rapidly —*Am Therapist*, September

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THE ETIOLOGY AND PROPHYLAXIS OF FUNCTIONAL NERVOUS DISEASES

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY JOHN PUNTON, M D

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KANSAS CITY, MO

In taking a retrospective view of the principal features which characterize the age in which we live, it seems to me none are more conspicuous and striking than the rapid advance of medical science In the many hundred years of its existence no such triumphs are recorded and no such brilliant results achieved as those which belong to the present generation

The principal results of such advance afford us the means of rendering finer discriminations in classification and diagnosis of diseased conditions, and consequent enlargement of medical nomenclature, all of which tend to increase the great mass of specific knowledge relevant to each department In no branch of medicine, perhaps, are the effects of such marvelous changes more visible and potent than those which pertain to the science of neurology

The vast increase of our knowledge of the anatomy and physiology of the nervous system and the application of this to disease has been found to be most useful in the correction of former erroneous inferences Hence a complete revolution has taken place in our knowledge of its pathology, which has also been the means of greatly enlarging the range of its organic diseases at the same time gradually limiting the power and significance of the so-called functional affections

We find that in connection with the study of the histology of the nervous system many other factors were necessarily implicated Among the most important of these was the study of their *etiology* and *prevention*, two of the mightiest forces connected with diseases incident to the progress of modern civilization To trace the intricate change of both structure and function, as well as all the problems connected with the prevention of such obscure neurotic affections is a task which so far has baffled the skill of the brightest intellects of our profession Nevertheless much has been done in not only discovering the cause, but also preventing their occurence by overcoming many of the agencies which contribute toward their production

Nervous diseases are increasing and multiplying at a marvelous rate, and there are physiologists who assert that both the European and American races are deteriorating as their civilization becomes crystallized This is accounted for by the increased demands of modern civilization Recognizing the extreme importance of the subject it is right that we devote special attention to its consideration

It would be impossible for me to refer to the many causes, or the theories which have been offered from time to time, to account for the presence of the varied phenomena associated with the more obscure neurotic affections designated as functional From time immemorial these numerous factors have been recognized to consist of two classes, viz Predisposing, and exciting In the former are included all the conditions pertaining to hereditary neuropathic taints, while the latter embraces all agents which tend to unduly excite the already predisposed, or become the means of creating certain morbid neurotic phenomena

One of the most important facts, which has been clearly demonstrated of late, proves that the entire nervous system in the normal infant and child is constantly undergoing marked changes in both structure and function, and that the former is much more rapid in its development than the latter, and that these are largely influenced by the conditions of heredity and environment, both in retarding as well as developing their normal conditions There is a marked disproportion between motor and sensory cell activity in the child and this can be easily explained on physiologic grounds, but it nevertheless renders the child more vulnerable to certain neuroses, such as convulsions, epilepsy and headache

The highest function of nerve cells is the power of inhibition, and this endowment is the last to be developed in the process of physiologic evolution Cells are capable of generating or storing up nerve energy, beside the power of distributing it For this purpose the cell calls to its aid the various nerve fibers, both afferent and efferent, and their peripheral end organs, hence the whole nervous system becomes subservient to the cell

It is very plain to see that if the generating or discharging functions are not subject to proper control by virtue of their feeble inhibition that nervous instability results, which is highly characteristic of the neurotic diathesis and hence plays a very important rôle in the production of nervous diseases When this abnormal lack of proper nervous adjustment or balance is again augmented by an already existing neurotic predisposition the individual is rendered even more vulnerable to trivial influences

The cell in its normal state has been shown, microscopically to present certain definite characteristics, which when subject to its normal daily activity gradually undergoes definite changes, both in its chemic and morphologic constitution These changes when the normal stimuli are unduly prolonged are even more pronounced The normal results of all cell activity is marked fatigue, but if the activity is unduly prolonged the cell becomes exhausted In the former case the cell still retains the power of its normal reaction during a period of rest, viz, twenty-four hours for every five hours of normal activity (See Rachford on Neuroses of Childhood, p 98) and becomes regenerated, while in the latter case the cell often becomes unable to further respond and is literally in a state of inanition Hence it becomes possible to clinically recognize three classes of cells, viz 1, those which are normal or in a state of rest, 2, those which are more or less fatigued after their normal activity, 3, those which are thoroughly exhausted by over activity

In diseases of the nervous system none of us will have much trouble clinically to recognize conditions representing these changes, for it has been shown by Hodge that the cells suffering from fatigue have a close kinship to neurasthenia, and it is only plausible to conclude that in functional diseases we may at first have similar cellular changes of greater or less degree, which may ultimately give rise to degenerate changes Excessive mental and physical application would therefore seem to be potent factors in the causation of diseases

In a recent article by L H Mettler on "Work and Worry," (New York *Medical Record*, Sept 7, 1895) the writer says in summing up "Work and worry, I therefore take it, are not baneful in themselves, not even when carried to excess, but the monotonous unbroken continuation of the excess is exceedingly injurious"

Professor Erb of Heidelberg (See *Medical Record*, March 16, 1895), in a recent address seemed to regard the feverish activity of the age as a symptom of disease "The over-work, over-crowding, over-stimulation, increased use of tobacco and alcohol, together with excessive railway travel with all its nerve-jarring motion," he thinks all tend to produce a loss of nerve tone, which ultimately results in neurasthenia, which is a refined expression of hysteria and hypochondriasis Commenting on this, the *British Medical Journal* says "While this may be true, there is another side to the picture, in that there is a greater knowledge of the subject, a greater tendency to freedom of exercise, to the freedom from strict conventionality, to the freedom from ailments that come from healthful surroundings, and that worry, not overwork, is the danger of the age, and this danger arises from decreasing and deferred marriage"

Worry is an exceedingly potent factor in the production of nervous diseases and persons suffer far more from the effects of worry of things that never happen than those which actually occur We live in constant anticipation of danger, and this brings with it a continued and prolonged mental state of anxiety The effects of such monotonous routine on the nerve cells is self-evident

The most conspicuous and important cause and that which underlies all the rest in producing and propagating all forms of nervous disease, is the transmission through successive generations of that peculiar bodily condition known as the "neurotic diathesis" This manifests itself by nervous instability and defective innervation of the organic functions, materially influencing the normal development of the nervous system in the offspring and makes itself felt by a constant tendency to degenerative changes in the nerve elements, rendering the subjects of it peculiarly liable to break down under strain that would not affect persons inheriting a different constitution

Jonathan Hutchinson says (See "The Pedigree of Disease") "I would define a diathesis to be any bodily condition, however induced, in virtue of which the individual is through a long period, or usually through the whole life, prone to suffer from some peculiar type of disease" With this definition I fully agree The same author also says 'Some diatheses are inherited, others are acquired Of some the effects are permanent or constant, of others they are transitory or recurrent after intervals of health The term should, however, never be applied to any condition of health which is expected to pass away and leave no trace, for the idea of persistence in some sense is always implied On the other hand, we do not confuse diathesis with dyscrasia, for whilst the latter definitely implies bad health, the former only denotes proclivity and may be used when its subject seems perfectly well" Hence, we learn that the individual diathesis may present itself in every degree from a slight weakness to a very pronounced morbid tendency

The term temperament is also liable to be confounded with diathesis in its more simple manifestation, hence the term temperament is used to designate the "sum total of the physical peculiarities of an individual exclusive of all definite tendencies to disease" Thus says Hutchins[illegible] "To d[illegible]inguish between temperament and [illegible] say " the former is a matter of physiology and the latter of pathology"

Inherited diathesis is more often, than not, entirely latent at the time of birth and is susceptible of aggravation, or in some cases of cure in after-life "Such alternations are not possible in the constitutional peculiarities which we name as temperament"

I have thus dwelt at length on these terms in order to overcome a very common source of useless argument on the part of the profession by failure to comprehend the full significance of certain technic terms

A certain predisposition or tendency to disease is transmitted from parent to child, and often is the only responsible agent for the presence in the offspring of any one of the various neuroses, such as hysteria, chorea, neuralgia, migraine, epilepsy, together with more serious organic spinal and cerebral diseases, including insanity

We do not presume to explain all the intricate details concerned in their genesis, or even the pathologic changes occurring in the tissues and cells, as the laws which govern the transmission of hereditary traits are generally unknown, but the number of inheritable deviations of structure and function are endless

These abnormal conditions of inheritance are often the result of imperfect growth, defective nutrition, incorrect habits, injudicious education and modes of life of the parent, the general effects of which tend to lower the normal standard or health and are marked by having a special injurious influence upon the general development of the nervous system, impairing its functions and exhausting its specific energies The morbid products resulting from such deterioration are readily transmissible from parent to child and furnish the germs which in the offspring establish the neuropathic constitution They are the seeds which may or may not remain latent for years, but if subject to the stimulating processes of the educational period, or the excesses incident to society life they rapidly mature and strengthen until they manifest themselves in some serious form of nervous disease

The same causes which produced the deterioration in the parents are often allowed to have full sway in the child, already predisposed, and then a still greater deterioration is liable to occur Then again, Rachford (See "Neuroses of Childhood") shows conclusively that bacterial products are also important factors in the causation of nervous diseases by their direct poisonous action on the heat centers, thus producing fevers, more especially in children

The same author also states that arterial anemia and venous congestion produce nervous symptoms by their influence on the vaso-motor system of nerves, thereby weakening the inhibitory centers and rendering more excitable the various reflex functions of the medulla and spinal cord

This leads to malnutrition of nerve elements, resultin an impoverished condition of the blood This morbid blood state presents itself in two forms, viz, innutrition and malnutrition, the former representing a quantitative change or reduction in all the nutritive elements of the blood, while the latter implies a qualitative change in the essential constituents of the blood Clinically these conditions are recognized as the various forms of anemia Such conditions are a very common feature of nervous disease, as by far the greater majority of all patients presenting themselves for treatment are found to be below body weight and anemic

Another common source of nervous diseases is reflex irritations of all kinds Recent experiments prove that chronic reflex irritation can produce very marked changes in the nerve cells of the spinal ganglia, and this becomes a potent source of nerve instability, more especially in children and young girls by virtue of their special vulnerability

It is plain that children born of neurotic parentage inherit a weakness, and as growth and development takes place, are peculiarly liable to become victims of nervous disease in the formative periods of their life, especially at the physiologic crises, such as puberty, pregnancy, lactation or menopause

This neuropathic diathesis may not only be *congenital*, but also *acquired*, and it can be produced in persons born of unhealthy parents by the excessive use and abuse of agents such as alcohol, opium, tobacco, tea, coffee, excessive study and physical strains of all kinds

Education —All education should be governed and based upon an intelligent recognition of physiologic laws of growth, and a proper adaptation to them There exists in every child certain laws of growth and corresponding capacities, the proper development of which depends, to a large extent, upon the general bodily constitution of the individual The natural law of progressive development is as gradual in its operation as the growth of trees and flowers, and if during its formative period, it unduly exercises or stimulates any organic function, the body will never be brought to the highest state of development of which it is capable

By thus interfering with the natural sequence of the evolution of the body, we disturb the normal equilibrium of its various parts, and thus seriously mar the harmonious relation which should exist between the mental and physical constitutions In a well developed organization the normal equilibrium of its every force perfectly balances, and to use the words of an eminent medical physiologist, "There should be no power in a higher center or ganglia to compel a lower one to do more than it is fitted or is capable of doing"

Clouston says "The fatigue following their normal use should be absolute, in themselves, to compel periods of *rest* and yet we all know that it is counted a great power and achievement for any man or woman to possess the power of being able to work, think, feel or wake, not according to their innate capacity, but according to his or her wish, or the imagined necessity of the occasion The exercise of such a power is really a want of nervous adjustment, and a physical imperfection not to be desired or encouraged, indeed, it is a very dangerous possession to those who inherit a neurotic diathesis" The functional activity of the brain and nervous system is established at different epochs, and perfected at different rates By cautious stimulation we bring it to its highest development, but by undue haste and excessive use we ruin its normal equilibrium

In the stimulating process of the educational period the cerebral cortex, which is the seat of all conscious mental action, undergoes a change of function corresponding to its excessive stimulation, and which, if long continued, culminates in a preponderance of nerve action, which is highly characteristic of the neurotic diathesis The nervous system, with the brain as its controlling center, rigidly obeys the natural law of evolutional precedence, and its functional energies are as gradual in attaining their full force and capacity as any other special apparatus of the body Anything, therefore, which has a tendency to force these powers and capacities, interferes with its normal equilibrium

It has become the custom of the present day for school and college professors to prescribe for their pupils the study of the more intricate problems relating to their special departments, believing this to be the one thing needful to accomplish any and every purpose in life Thus the ancient Roman law of physical excellence is completely reversed, and with us intellectual superiority and mental achievement take precedence of all aims and duties of life In the effort to excel, every other part of the organism becomes unduly subservient to the intellect, and the natural physiologic law of evolutional precedence is wholly ignored

To day the instruction of children is on purely business principles, without regard to their physiologic strength or capacity The largest amount of knowledge is to be acquired in the shortest time possible Rapid progress and intellectual supremacy is the highest test of a desirable school, and the teachers that are most in demand are those who are the most earnest and zealous in their work

A magnetic power of inspiration is the qualification *par excellence* in a teacher and that teacher is most in demand who can secure the greatest brain tension during the allotted hours of study

Intellectual achievement is the goal which all are seeking, irrespective of age, sex, mental or physical strength The home management of children also contributes its share to this brain tension Late entertainments, reading exciting works of fiction, social pleasures and strains of all kinds tend to bring about in them morbid growth

Nervous excitement is at a premium, and therefore prevails in the homes, school, church, and indeed every relation of life

A recent writer says it is a question whether the competitive examinations, as now carried on in schools and colleges, are not doing more to enervate the mind than to strengthen it Those who attain the highest honors are generally found to be diseased

Intellectually speaking, every mind has a track of its own To place all children on an equal mental footing, when they reach a certain age, is a violence to nature which brings its own equivalent in physical and mental deterioration

We recognize that certain causes produce certain effects, and we can see how the future generations are influenced by the good health and the proper mode of living of the present, and we must use every means at our disposal toward influencing those with whom we come in contact to study the laws of health, to reform their habits, and instruct in all matters that pertain to hygiene, and further in every way a more complete general knowledge of the human organism, and the laws and forces which govern it The short duration of life and the habits and modes of living of many persons can be attributed solely to their profound ignorance of themselves The consequence of their habitual neglect and ignorance entails upon their progeny untold misery, much of which might be prevented by a more intelligent understanding of themselves

The neurotic diathesis and its baleful influence upon the rising generation is not as well understood by the masses as it should be The reason for this may be explained to some extent by the prevailing false system of medical ethics which condemns any attempt on the part of the members of the profession to popularize purely medical topics The relation of the physician to society is not only that of a therapeutist, but also a conservator of the public health The full mission of a cultured physician is not complete if his educational attainments are solely bestowed upon the medical fraternity, and those coming within his range for treatment In addition to his strictly professional duties he owes a duty to the public In the past the attention and efforts of the profession have been too exclusively directed to the solution of problems connected with the cure of disease, and the great importance of its prevention has not been sufficiently recognized

The duty of every man who deals with his profession as a noble and humane science, is rather to point out the methods of preventing occurrence and eradicating, if possible, latent constitutional defects, than to confine his attention to the treatment of its active manifestations The vast amount of preventable disease which is filling thousands of premature graves and destroying the hopes and happiness of both the young and the old in every community of our land, certainly demands the earnest attention of the medical profession

So long as we remain indifferent to this great and growing evil, just so long will nervous disease continue to increase and swell the rate of premature mortality Several of the more progressive members of our profession both in Europe and America, now recognize the great need of a more general dissemination of medical knowledge among the masses, and are advocating its adoption as one of the most powerful agents in the prevention of the spread of nervous diseases

"Any work," says Dr Mann, in his recent work on physiologic medicine, ' that we, as physicians, do toward influencing the public to study the laws of health, to reform their habits of living, to promote the use of baths, to encourage temperance, ventilation and due exercise, and to further a more complete knowledge of the human organism and the laws and forces which govern and regulate it, and in diffusing a knowledge of all the means necessary for the preservation of good health, will produce its exact equivalent of results in the prevention of disease We shall thus develop in the masses an intelligent, self-helping character, tending to robustness of body and robustness of mind "

Another favorable field for a more thorough practical drill in matters pertaining to mental hygiene and the study of physiology is the public school I am not unmindful that some attempt has been made in this direction, but it is merely an attempt

Very few pupils (and shall I say principals of schools) realize the full force of one of the first principles of physiology, viz, that within certain limits the growth of an organ is in proportion to its exercise, and that all excessive exercise is followed by a corresponding depression If this law were thoroughly understood and obeyed there would be less headache and disc nted to the public school In cases where th stitution is inherited the morbid inherit terious and necessarily fatal doom, c to overwhelm its victim It is p which can be nd even e able to explain fully its intricate pathology, but we know it manifests itself in a great many distressing forms of nervous diseases, and the wise physician, after recognizing the morbid taint, anticipates the pathologic conditions likely to arise, and therefore does not neglect to advise means necessary for its complete removal

The nervous temperament predominates in American women, which is now recognized to be due to some trophic lesion This being readily transmissible from parent to child, if we are to avoid its continuance in the young we must resort to such methods as will produce a better type of physical constitution and mental stamina Hence the great indication in the prevention of nervous diseases, is to harmonize the physical and mental organizations in such a manner that their correlative forces equally balance

Marriage —In every individual two streams of ancestry mingle, each furnishing its own specific mental, moral and physical characteristics As a general law, the stronger character predominates, but never so strongly as to completely overcome the weaker Pure blood should certainly be the desire and lofty ambition of every individual The promulgation that "the iniquities of the fathers shall visit the children, unto the third and fourth generation," can not be gainsaid Our country to-day stands in need of more healthy men and women, and one way to secure these is by wisely regulating matrimony

Every marriage acts upon society in a fourfold relation, by first affecting the conjugal pair, second their progeny, third their relatives, and fourth the community in which they live

I believe in certain cases, *marriage should be governed by law*, for in the light of facts, who can truthfully argue that it is nobody's business whom we marry? Habitual governmental regulation of marriage comes with higher grades of civilization

The Spartans regulated marriage with sole reference to the good of their republic, men were subjected to severe penalties if they married too early or deferred it too late Unhealthy children were destroyed as unfit to live (And here allow me to say that such a movement is already projected in this country) Every care was used by the Spartans to insure the health of infants and children But instead of studying the interests altogether of the state and nation, we, as a Christian people, should view it from a more humane and philosophic standpoint

Generally speaking, no special effort is now being made on the part of parents and guardians to choose proper society for their wards Those easy American habits which permit, unchecked, the free social mingling of the young without regard to the laws of heredity, often result in marriage and intermarriage of consumptives, epileptics and other diseased and defective individuals, while the less demonstrative insane and more demented specimens of humanity have also free access to all classes of society Even the known vicious and morally perverse often form unions in the more devout families We know too well the sad import of such thoughtless and ill-assorted marriages, especially, therefore, is it our duty to impress upon the minds of parents the necessity of wisely informing their children on these matters, lest ignorance prove a future source of evil The responsibility of the medical profession in relation to the coming manhood and womanhood of our race can not be overestimated

The American, however, is accustomed to regard his individual rights to the exclusion of all others, and the conviction that a man can be what he wills to be, is lodged in the most intimate fiber of his being Such an idea, however, is erroneous, especially when subject to the laws of heredity, and the results of its misapplication are self-evident

Physicians who have children growing up under their professional care should endeavor to have them well developed physically, even if it be at the expense of their education We too often sacrifice the constitution for what is deemed educational necessities

The prime necessity in our children is to have plenty of bone, blood and muscle, with an accurate balance between the physical and the nervous system, and if something has to be sacrificed let it be their education, and not their physical health

The children of neurotic constitutions should be kept fat from birth, and when they arrive at the school age their brains should not be forced

As a general rule, these children are precocious, hypersensitive and possessed of a vivid imagination Their parents and friends admire their quickness to learn, and urge the teacher to push them forward to the fullest extent, that they may out-distance all competitors All such precocity should be discouraged and condemned, as it is said by the best authorities to be a sure sign of biologic inferiority

Dr Porter of St Louis, in his studies of school children states "that mental ability is on the average greater in large children than in small children of the same age"

In some recent research in the schools of Kansas City I found, however, that the precocious children were invariably below body weight and poorly nourished

Our local city authorities are too prone to ignore medical aid in their sanitary and educational legislation No class of persons are better prepared to give useful advice in such matters than the scientific physician More especially is this true of education, and a wisely selected medical board should be appointed in every city to inspect the public schools at regular intervals and determine which children should and which should not be allowed to study the more difficult branches

It is nonsense to regard the child's age as the criterion of its mental strength and capacity It seems far more logical and scientific to allow the child's *height* and *body* weight to govern this Definite standards of weight should be fixed for every age and height, and every school boy and girl having a nervous diathesis, whether it be congenital or acquired, should be weighed at regular stated intervals, and if found to be below the fixed standard they should be compelled to forego some or all of their studies and be placed under proper treatment until the loss in body weight, at least is recovered

The first evidence of mental deterioration is manifest in a loss of body weight Children of nervous constitutions should be taught to lead regular and systematic lives, and the necessity of developing fat and muscle, as well as the dangers attending such neglect

It is outside the province of the responsible duties of a principal of a school to determine which child shall, and which shall not study hard It needs a skilled physician or neurologist

Such a plan would also prevent much undeserved censure of the principals and teachers by the parents complaining that their children had been unnecessarily retarded in their grades

We must be more active and alert in this direction, and not until we, as a body take a more decided stand, can we hope to successfully stem the rapidly advancing tide of both organic and functional nervous diseases

If it be true that the physiologic nerve cell is limited in its capacity, and that its normal activity results in the expenditure of a certain amount of force which, when discharged, presents changes corresponding to fatigue, and that a certain amount of rest is not only capable but necessary to restore or regenerate its normal function, in the absence of which, changes corresponding to its inanition occur, then, clearly, the duty of the physician is to use all possible means to secure the needed *rest* for all morbid conditions of the nervous system in which nervous irritability and instability are the chief clinical criteria, and those which form so great a part or the subjective phenomena of the purely functional neuroses and psychoses

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DEGENERACY, ITS CAUSES AND PREVENTION

BY ARTHUR ROWLEY REYNOLDS, M D

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Practically all recent books and essays upon the subjects quote statistics to prove a startling increase of insanity, of criminals and of pauperism They either state or intimate that the race will soon be overwhelmed by the number of persons of this character, unless something is done to prevent them from procreating their miserable kind

Before we accept this gloomy conclusion, we should study the matter and see if the statistics may not be faulty We may also, with profit, study the conditions that are in the way to prevent those who are normal in their development from continuing so indefinitely through succeeding generations, as well as to recognize and study what influences are at work to counteract degenerating tendencies

There is ground for hope that some of the apparent increase shown by statistics is not real, but due to the greater care in the census enumeration of later years Moreover, insanity and other mental defects are now treated as a disease and misfortune, and more frequently come to light while formerly they were too often considered a blemish and disgrace and hidden from view We may draw some consolation, too, from the fact that latter day segregation of many of this class will prevent their reproduction and favorably impress the figures of the future Nevertheless, we recognize that whatever arguments there may be against the correctness of the statistics of the question, we yet know that the dependent individual is most numerous and a great and ever increasing burden to the state

Economic conditions, new to our generation, have arisen with the vast application of steam and electricity and have played a part in the enormous growth of cities The furious passion for money pervading all classes, and the sway its possession gives in business, in politics, in society, in religion, in courts of law, in legislative bodies, is lea[illegible] Great wealth has led to a des[illegible] enhance its power, and giant co[illegible] formed, enormous enterprises undertaken, all of which gives a demand for men at wages and destroys the individuality of small concerns, while the fall in the price of produce has made farming unprofitable These conditions make rural people turn a more willing ear to the promise of shorter hours and regular stipend, and they swell the stream setting toward the cities The farmer forgets his freedom and his independence and recalls it too late, when he finds himself a mere cog in a great machine in the city, and no hope of relief when his employment is gone He is then in poverty and hope dies within him He is tempted or driven to do evil and may never be able to reform He has not his native trees for company and inspiration There are no flowers to cheer, no calm for reflection, no quiet for study Children born and reared under such circumstances start the race of life with a serious handicap

No argument is needed to prove the power of heredity It is seen every day in the development of the trotting horse, whose breeding is regulated with such nicety that the height, weight, color, speed and even the cash value of a colt can be told, almost to a certainty, before it is born The state undoubtedly should make use of this knowledge to perpetuate and upbuild the race, as an offset to the increasing tendency that density of population, through vice and disease, makes toward degeneracy

In our own country we suffer from the additional burden of imported dependents Indeed it has been said that foreigners furnish one eighth of our population one-third of our paupers, one-third of our criminals and one-third of our insane It is true, I believe, that we have a law of Congress to prevent the importation of dependent persons So long, however, as the conditions of life are easier in our own country, the degenerates of Europe and Asia will find their way to our shores

A strict medical supervision of all marriages is strongly advocated by some writers, as a safeguard against the increase of this class of persons It is unquestionably wrong for degenerates of a pronounced type, and those who are dependent, to propagate their kind, and there can be little doubt that the state has a right to step in and restrain the weak or the willful of these classes, through the application of medical knowledge, to the case of every applicant for a marriage license, but whether or not this will cure the evil is a question that should be carefully studied It is not the purpose of the writer to dampen the ardor of those who would regulate the evil by law, on the contrary to urge it and freely avow belief that steps should at once be taken, beginning at the marriage license windows of our country, to prevent the union of those who, by the almost unerring law of heredity, will reproduce a brood which will be a charge upon the state or a burden to society Proper laws, intelligently enforced, will directly restrain a great many It is our belief, however, that their chief use will be to form a focusing point, from which knowledge shall radiate We believe further that it is only through the proper education of the masses that those unfit to reproduce their kind will be restrained And we believe [illegible] er even though [illegible] that the race is [illegible] one [illegible] her, where the [illegible] e unf [illegible] equally true t[illegible] t [illegible] ng on [illegible] ere t [illegible] laws an [illegible] nd statutory enactments are of but little value, unless backed by a healthy public opinion But there are agencies constantly at work to counterect the degenerate tendencies that should be considered before we despair of the race

While it is necessary to look evils squarely in the face, it seems wrong to enumerate them too often, to discant too loudly upon the ills that beset us, or to see only the dark side of the picture Human nature is prone to brood over the sorrows and trials of life The uncanny things are too apt to be kept prominent and we are too likely to forget the cheery, bright and sunny side of affairs The world contains more sunshine than shadow, more joy than sorrow, more smiles than tears, more righteousness than sin, more good than evil, more charity than theft Adam's sin is repeated still, but there is an ever-progressive spirit of the Nazarene pervading every day life

It is well to prevent the degenerates and dependents from procreating, but it is infinitely more important to correct whatever there be in our civilization that drifts toward degeneracy Human beings crowded together so close that the home loses its individuality, its sanctity and its seclusion, or that vitiates the air that is breathed, that makes artificial feeding of old or young necessary, that pollutes the drinking water or in any way hampers physical growth Whatever there is that blunts the moral sense, that whets the appetite for alcohol, that excites the passions or gives opportunity for licentiousness must be wrong All these evils are fostered by too close living in tenements, whether located on the boulevard or in the slums, and just as sure as a cloudy sky portends the coming of the storm, such conditions lead on directly to drunkenness, crime, idiocy and insanity Whatever is being done, or whatever may be done to make country life profitable and possible is an aid to segregation and must therefore be a step in the right direction The trend of population toward large cities is not a good omen for the race d calls loudly for legislation that will turn the cur- nt back again The great and rapid growth of our ties, that receives so much admiration and is quoted such signs of prosperity and greatness, will ultimately result in a plague upon humanity if some wisdom does not appear and set the tide the other way Can it be that the crowding will go on till the curfew will be necessary to segregate the young in their homes, that the evil of street association, as a school of vice and crime, will be lessened? It is well to pause and inquire where is the profit, in the end, of clustering of industries in large cities, if sweater's dens must be the accompaniment It may be well to consider whether or not those having knowledge of medical sanitation and sociolgy should not have a larger place in our legislative assemblies It seems that their valuable knowledge should be used in deciding our laws of immigration and other legislation relating to the welfare of the race, while it would lessen the too common tendency to decide such grave questions upon the sordid demands of barter and exchange

We have with us now and always have had splendid and powerful agencies, operating with vigor, as a stay to crime and a help to humanity Chief among these is the church through all her divisions and denominations, for whatever the differences as to church government may be, their teachings are as one on the question of morality and right living

I wish, however, to speak more particularly of an agency that is paramount to all others in its influence toward the regeneration of the race, an agency that has already done a vast amount of good and that promises, if properly backed and intelligently followed, to solve the problem, an agency that strikes almost at the root of the evil, an agency almost divine indeed—for it is none other than the new woman I do not refer to the new woman of newspaper creation —not the woman who hopes by copying the follies of man or his wearing apparel, to emancipate herself Not the woman who would wage a war of strife and contention with men She is not new—she is as old as civilization itself

The real new woman understands that there is within her an inherent and natural power to command the actions of man and sway him for good or for evil She realizes her power, and that hers is the enormous responsibility to shape and control the destiny and perpetuity of the race She realizes that it is her high and divine privilege to be the mother of mankind She realizes that it is among her first duties to equip herself, mentally and physically, to graciously bear the joys and responsibilities of maternity. She realizes that there is no loftier mission on earth than to fashion the character and train aright the intellect of the growing child She realizes that the budding boy is the coming man She realizes that it is a crime for man to grow so grasping as to enslave his fellow creatures of either sex She realizes that the good things of this earth are God's bounty and intended for all his children alike She realizes that the mad race for wealth, with its rapid concentration "makes countless thousands mourn ' She realizes that the frenzy for gold is every day enhanced by the demands of some of those of her own sex, as they struggle to reach the summit of fashion and social power She realizes that the mother is largely responsible for the traits of the child, other than those of heredity, and that it requires no more time to learn and love the ways of purity, than to learn the ways of vice and iniquity She realizes too that proper training is the best preventive of perversions of every kind She has established and is all over the country conducting branches of the greatest institution in American history—I refer to the kindergarten

The kindergarten has reversed the old order of things, when the daughters of the poor and uneducated, and perhaps the vicious, were made the companions, the guardians and instructors of children in the homes of the rich Now young ladies of good position in the world graduate from universities to take positions in the kindergarten, qualified to mold, fashion and discipline the minds of children of the humblest, beginning with the child at the very dawn of its intellectual development Devotees of this new cause deem it a privilege to work all day in the creche, caring for children of mothers who must toil for daily bread

The new woman believes it is a perfectly normal desire to want to wash and dress, to entertain and caress a helpless babe, even though it be of lowly birth, and if the babe should be her own, she counts the moments she is forced to be separated from it She feels pity toward her married sister who dwarfs her maternal instincts, or denies herself the boon of motherhood, or who shuns the society of the children she has unwillingly borne The new woman sees in life upon a farm better discipline for the mind than can be found in the greatest counting room She sees that the same farm can do more for the physical development of men and women than any manual training school in the land She sees that the music of the birds inspires deeper thoughts of God and Nature than all the grand organs in the universe, that the sighing of the wind through the trees and the patter of the rain on the roof inspire the loftiest emotions

The new woman is she who founds homes and settlements among the poor, and successfully conducts them She consoles the needy in their trouble and feeds them when they are hungry She encourages the idle to work and helps them to secure it and if necessary she instructs them how to perform it She founds and conducts useful societies, classes, schools and clubs of every sort among the poor Her spirit and her genius build fresh-air sanitariums, floating hospitals; and in the summer time sends from the alleys and slums the debilitated weaklings to the green fields, the sylvan groves and the babbling brooks, to drink in the inspiring delights and breathe the pure air of the countryside I will not attempt to enumerate all the institutions she is working through, for they are well nigh countless and daily multiplying

When the new woman's hand is sought in marriage, she is likely to have inquiry made as to the young man s health and his morals, rather than inquiry as to his bank account What his wealth in the great distinguishing characteristic that elevates him above the animal world—his manhood, his judgment, his intelligence? It is through the new woman that society will eventually come to apply the same rule and exact the same standard of morality for men that it does for women and eventually elevate him to her plane

The new woman has learned the terrible cost in pain and suffering to her sex and her offspring that so frequently comes from a union with dissolute men She has learned through the advance of medical science, that the harvest reaped from a sowing of "wild oats" in her husband's youth is too often one of disease and death to herself and a pitiful inheritance to her child

Higher education through schools, great universities and libraries is not enough Kindergartens should be founded in sufficient numbers to reach all the young The new woman will multiply the kindergartens and reach the degenerate or wayward before habits of thought or action are formed and do for the infant mind all that training and example can do

Through the present work of the new woman and its future development must come the public knowledge and the public sentiment that will lead to the necessary reform to let daylight through the slums, to raze the unsanitary tenement to the ground, to pull down the towering buildings that harbor miasm in their shadow, that will make it possible for human beings even in cities to live on the surface and not be forced either into the air or under the ground

Through this direction of forces, cottages will be built for all so that man can return to his primal condition Even the very poor will not be denied free access to God's sunshine, pure air, green grass, the shade of trees or the beauty and fragrance of the flowers

A vast number of holy influences are constantly at work that realize the necessity of proper care and training of children while they are young Let us hope it will go on till our philanthropists and our State legislatures will see the economy of laboring more for institutions for the young, for if they be trained aright, it surely means economy in hospitals, asylums and prisons

36 Washington Street

THE PSYCHO-NEURAL FACTOR IN SURGERY

Read at the Meeting of the Mississippi Valley Medical Association at St Paul Minn 1896

BY C H HUGHES, M D

PRESIDENT OF THE FACULTY AND PROFESSOR OF PSYCHIATRY AND NEUROLOGY BARNES MEDICAL COLLEGE ST LOUIS HONORARY FELLOW BRITISH MEDICO PSYCHOLOGICAL ASSOCIATION AND OF THE CHICAGO ACADEMY OF MEDICINE

ST LOUIS MO

As a thorough knowledge of general and special pathology is essential to the soundest surgical judgment as to the propriety and necessity of an operative procedure, so is a knowledge of the nervous system of the patient and the relation of his nervous system to the local disease found essential to proper diagnosis and prognosis The time is coming and now is when the surgeon should have wide neurologic and psychiatric knowledge in order to avoid fatal mistakes and to most successfully practice his art The manner in which the necessity of a grave operation is announced may to certain psychologically unstable constitutions pre-determine a fatal issue, or it may give to a doubtful issue a possibly favorable result There are some constitutions so neuropathic and psychopathically predisposed that the shock of such an announcement would precipitate a crisis of mental alienation, and it were better that the proposed operation should be abandoned than insisted upon under such circumstances, or that the patient should be gradually approached and prepared by cautious speech and suitable precursory, reconstructive and tranquilizing neurologic treatment Some patients before being operated on should be made almost entirely over in the tone of their nervous systems and some should be let alone, tranquilized and made comfortable and allowed to die in happy euthanasia What, for instance, is the use of exsecting a far-advanced cancerous uterus after the cachexia has long persisted and the nerve centers have become irreparably neuropathic and the neurasthenia has become profoundly irreparable from the prolonged pain and insomnia The rational process would be to stop the pain and insomnia, correct as much as possible the neuratrophia that exhausts and makes the patient's last days comfortable by neurologic and antiseptic treatment and the best surgical suggestion without the knife In fatal surgical results the reputation of operative surgery suffers often because overlooked neuropathic conditions were at fault

In my judgment the previously applied skill of a neurologic clinician would postpone many operations indefinitely which are now fatally performed and properly prepare other cases for the surgeon s knife and a successful surgical issue, which are now doomed when the operation is decided upon, because conditions of endurance of the operation are not in the nerve centers of the patient

The cause and effect of psychic shock in different patients are not always considered as they should be by either physician or surgeon The possible evil effects of words and acts at the bedside or before an operation that tend to paralyze or even produce a paresis of hope [illegible] not always duly considered The surgeon who bluntly announces to his patient, after revealing the necessity for the knife and having all things ready, "now I am going to operate, the proceeding may kill you, but you would be better off dead than alive as you are, let us hope for the best," must have a strong-nerved, brave subject to not be somewhat depressed by such an announcement, and such a depression before a further depression of vital centers by chloroform or ether, even in the strongest nerved is not good clinical practice It doeth not 'good like a medicine " Such a procedure may have the virtue of candor to commend it, like the candid announcement by the physician that his patient is likely to die If he is saved it will be 'by the skin of his teeth " Recovery is not the rule when such premature prognoses are announced, sometimes because the patient could not have recovered by reason of an incurable malady and sometimes of the vitally depressing effect of the speech that destroys hope and removes its buoyant influence from those vital nerve centers that influence the metabolisms of the organism and the assimilative processes of organic life and reformations of tissues

In our intercourse with patients, medical or surgical, the untoward and often fatal influence of depressing mental suggestion on the patient should always be avoided Hope, that springs eternal in the human breast if we do not interfere with it, is itself a buoyant medicine, and faith in the physician or surgeon is therapeutic power that should never be rudely shattered by us Candor is to be commended, but it can be too bluntly displayed and often is, for the welfare of our patients Besides, the physician's or surgeon's judgment may be at fault It often is There is more vital resistance and power of repair in the patient than the medical or surgical attendant thinks or knows Vital power is not always a definitely measurable quality, depending as it does, upon ancestral factors in the upbuilding of the constitution—the cerebro-spinal axis and the sympathetic system of the patient—of which we are never fully cognizant The patient should always have the benefit of this doubt in our prognostications before him or to him

The little surgeon who pompously displays his tray of instruments before his trembling patient, and to his woful, wondering mind descants upon the operation he is about to perform and the chances of recovery or displays a nonchalant, unfeeling mien, acts in an unprofessional manner and does not increase his patient's chance of getting well quickly And the great surgeon who takes his patient into the operating room and places him while conscious on the table, himself with instrument in hand, while white-aproned attendants gather around the victim, approaching with sponge and bottle and instruments and appliances of the impending operative procedure, is not so wise a surgeon and does not so fully consider the effect of depressing psychic influences as he who chloroforms the intended subject of an operation in another room or in the same room without these depressingly suggestive influences

Had I continued the active practice of surgery (of which I once had, as you know, ample clinic experience) I should never vaunt the implements of my art before my patient, at least before he should recover from the operation, nor anesthetize him in the presence of any depressing influences Where practicable, I would for purely elevating psychic effect, begin the administering of the anesthetic in the most cheerful room I could prepare I would drape its walls with suggestions of hope and inspirations of courage I would have nothing about me at that time suggestive of blood I would cheer him so far as I might without falsity, mention similar cases, if I could, that had undergone his approaching ordeal successfully and let him take his operating couch and anesthetic as "one who lies down to pleasant dreams " I would proceed thus because I am a psychologist and have added something more than operative skill to previously acquired medical knowledge I would be as tender with him about inflicting the mental pain of dreaded apprehension as "one who would not needlessly set foot upon a worm " I would do thus, not only because it would be the dictate of tender feeling, but because a sound psychology and psychiatry enjoin it

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THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration held at Atlanta, Ga , May, 1896

BY EUGENE FOSTER, M D

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE AND STATE MEDICINE AND DEAN OF THE FACULTY OF THE MEDICAL DEPARTMENT UNIVERSITY OF GEORGIA AUGUSTA GA

(*Continued from page 911*)

Now to a circumstantial examination of the charge of transmission of syphilis by vaccination

The medical literature of every civilized nation has been ransacked for the purpose of substantiating this charge "The London Society for the Abolition of Compulsory Vaccination," ever active in seeking and disseminating all information detrimental to the cause of vaccination, has put together all cases of alleged vaccinal syphilis which its active investigators could hear of Here is a copy of the original paper from that society, received by me in 1884 ‖

VACCINO SYPHILIS

The following is list of authenticated and published cases¶ of transmission of this one disease alone

Lancereaux has published the following cases of vaccino syphilis

By Cerioli	40	By Lecoq	2	By Chassaignac	1
By Tassani	46	By Galligo	14	By Hérard	1
By Surgeon B	19	At Rivalta	46	By Adelasio	2
By Hübner	8	By Trousseau	1	By Monell	1
By Marcolini	40	By Maronni	34		
By Viani	2	By Devergie	1	Total	258

To these I have added the following

By Hutchinson	24	At Lebus	18	By Fuqua	52
By F Smith	1	By Depaul	59	By Cullimore	1
By Hulke	1	By Sebastian	1	In Algiers	58
By Oldham	3	By Collins	2		
				Total	478

M Briquet appropriately says "A competent observer and a complete observation, reported with such details as render the statements capable of being checked by the reader, are indispensable requisites for establishing the reality of an ordinary fact in medicine, and if for establishing an ordinary fact, how much more when the facts alleged are confessedly so rare, and so contrary to all previous experience, as these must be admitted to be " To correctly investigate the question of vaccinal syphilis we must first determine the question of inoculation of the lesions of secondary syphilis Experiments by competent observers have demonstrated that condylomata, ulcerated tubercles, psydracious pustules of ecthyma, pustules of acne, mucous patches and the blood of syphilitic subjects, may be inoculated into the constitution of the person not already infected with syphilis Now, it is an admitted principle in the teachings of syphilography that the secretions from pathologic lesions, not themselves syphilitic, although occurring upon the bodies of syphilitic persons, do not contain the virus of syphilis, unless admixed with blood Gonorrhea upon a syphilitic patient reproduces gonorrhea by inoculation, and not syphilis, and the same is true of chancroid All of these lesions of secondary syphilis, except the blood, may be eliminated from this discussion, for we can not imagine how any other of them could contaminate vaccin matter in its rational propagation

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‖ From my paper before American Pub Health Assn

¶ These cases have been fully examined and a brief analysis of some of them will be presented later on

Is the effort to inoculate a healthy person with syphilitic blood invariably successful, and, if not, what proportion of success will attend these efforts? The following presents the results of all such efforts to be found detailed in the most authoritative works upon syphilis

Name of experimenter	Number of inoculations	With success	Without success
Anonymous surgeon of the Palatine	9	3	6
Waller	1	1	
Gilbert	1	1	
Pellizzari	5	1	4
Lindwurm	1	1	
Thiry	4		4
Lalagrade	3		3
Diday	20		20
Total	44	7	37

Thus, gentlemen, we see that where intelligent physicians, bold enough to test the matter, after deliberately and carefully endeavoring to produce syphilitic infection by inoculating healthy subjects with syphilitic blood, failed in 84 per cent of all such efforts, only those efforts were successful where as by Pellizzari, the anonymous surgeon of the Palatine, Waller and others, large surfaces were denuded and syphilitic blood in large quantities kept for many hours to the denuded spots

It is, of course, impossible in this discussion to enter into an extended or minute examination of the cases of alleged transmission of syphilis by vaccination The following embraces nearly if not the entire list of reporters of vaccinal syphilis, as given in the best works upon syphilis

Name of Reporter	Number Vaccinated	Number Infected	Number not Infected
Cerioli	46	40	6
Tassini	64	46	18
Surgeon B	24	19	5
Hübner	13	8	5
Monell	1	1	
Marcolini	40	40	
Viani	2	2	
Lecoq	2	2	
Galligo	14	14	
At Rivalta	63	46	17
Trousseau	5	4	1
Marone	34	34	
Devergie	1	1	
Chassaignac	1	1	
Hérard	1	1	
Adelasio	2	2	
Totals	313	261	52

HUTCHINSON S CASES

Series of Cases	Number Vaccinated	Number Infected with Syphilis	Number not Infected with Syphilis
First	12	10	1
Second	26	9	17
Third	13	1	12
Fourth	Unknown	1	Unknown
Fifth	Unknown	2	Unknown
Sixth	Unknown	1	Unknown

It is absolutely necessary, in an "investigation of alleged cases of vaccinnal syphilis, to ascertain, 1, whether we are really dealing with syphilis 2, whether, if this be so, the syphilis is not hereditary and a mere coincidence or evolution of vaccination, 3, whether, if it be acquired syphilis, this has not some other origin unconnected with vaccination, or attempt to vaccinate, 4, whether, if the acquisition of syphilis be reasonably traceable to vaccination, or attempted vaccination, there is evidence, direct or presumable, that the so called vaccination had been done from a genuine vaccin vesicle, and that the products of that vesicle had not been mixed with some of the inoculable products of syphilis Not till this was settled would any question arise about admixture of blood The interest and importance, after all, of the cases in which vaccination is alleged to have communicated something beside its own infection, turn entirely upon whether the vaccination had been performed with unmixed lymph of genuine vesicles—vesicles about which no competent person would make a mistake '

Seaton (Handbook of Vaccination) appropriately says 'It must obviously be impossible to discuss at length, within such limits as in a general treatise of this kind could be allowed, all the cases that have been cited as evidences of the communicability of syphilis by vaccination The most satisfactory course will be to examine carefully three or four cases typical of the kinds of proof which have been advanced of this occurrence "

The following is an extract from his review of alleged cases of vaccinal syphilis "1 An epidemic of syphilis reported by Cerioli as having occurred in 1821 (inquiry made eight months after its orgin The account given of this epidemic is of the loosest kind it was not proved, or even alleged, that the child, from whom the lymph supposed to have been the origin of the outbreak was taken, had ever had syphilis), 2, another epidemic in 1841, seen also by Cerioli (investigated likewise after a very long lapse of time), the child from whom the lymph was taken never had syphilis but it was said that the year before his father had had syphilis "

Surgeon B "It appears that in a town in Germany twenty four people belonging to different families, were in February, 1849 (some on the 13th, some on the 14th, and some on the 15th), revaccinated, as they supposed, by him There is no statement of vaccin vesicles having been produced in one of the cases, but at the end of three or four weeks (*i e*, the ordinary period of incubation of syphilis), ulcerations of a syphilitic character began at the points of inoculation in nineteen out of twenty four persons operated on, and these were followed in due course by constitutional syphilis Here was syphilis, but no vaccination What could have been the cause of it? The vaccinator who was inculpated asserted that the operations were all done with lymph from a child who was *fort et sain* and who, having been vaccinated on the 4th of the month, had regular vaccinia We shall see immediately how far this statement was borne out, but it must first be noted—and is an illustration of the want of precision generally attending these accounts—that we are nowhere distinctly told whether the so called vaccinations, or any, or which of them, were done direct from the child, or whether the stuff taken from it might not have been collected on glasses, points, or tubes For all that appears to the contrary, there was at least the possibility of a mistake (such as has happened many times with regard to the matter of inoculable diseases) of taking lancets or glasses or tubes charged with one kind of inoculable matter instead of another But, assuming that the matter used came from the source indicated, what was the state of this source? Though it was said to be from an infant *fort et sain*, and that this was *surabondamment démontré par plusieurs témoins*, a different account was given by other witnesses, and a doctor, who saw the child on the 21st of February, a week after the lymph was taken off, when of course no suspicion of anything wrong had yet arisen, testified to the existence of some erythematous eruption, which was said to be like syphilitic roseola, and it died on the 24th, three days after his visit, of hydrocephalus But, more importantly, what was the state of its arm? It turned out that, according to an eye witness, there was on the eighth day of the child's vaccination not a vestige of vesicles, *aucune trace de boutons*, and yet two days later, the account tells us, several vaccinations were performed from it and lymph continued to be extracted from it for two days "

"In Hubner's case—a case of malpractice—there could be no doubt of some children having been syphilized, but no investigation of the circumstances was made till eight months afterward, and the account of the so called vaccinations (in most of which it is quite certain, and admitted, there had been no proper vaccine effect), was only what could be got from the statements and recollections at that interval of time, of the mothers "

Trousseau's case "A young woman was under treatment in the wards of the *hôtel dieu* for a uterine affection apparently of a non specific character, at a time when there were some small pox cases in the hospital, and wished to be revaccinated This was done by three punctures on each arm, from a healthy child at the time, and which, for anything that was ever known, never exhibited any taint Four children who were vaccinated with its lymph at the same time with this young woman went through vaccinia in its regular way and never had any subsequent syphilitic affection On the young woman s arm slight papules only arose, and the revaccination was looked upon as having failed She remained in the hospital a month after vaccination, fully the time necessary for the syphilis if there had been any imparted by the vaccination to have incubated, and she went out without anything the matter with her arms At the end of another month she attended at the hospital for treatment of her uterine complaint, and showed them two sores on one of her arms the character of which was not at first recognized but which turned out to be undoubtedly syphilitic It was not known at the time but was afterward ascertained, that she was a young woman of very loose character Now, assured by no one who knows in what extraordinary situations chancres have been met with such as the cheek the corner of the eye, in every sort of situation in which there could not be any, and never was any, suspicion of vaccination can say this was a case entirely free from fallacy as to the source of the syphilis '

"The occurrences at Rivalta, to which so much interest has attached, were of a different kind In 1861 there occurred in this village a very remarkable syphilitic epidemic Three similar epidemics are said to have been noticed in different places before—in 1814, 1821, and 1841—and if we include an account given (though not till some years after the occurrence took place) by a Dr Marone, a fourth in 1856 It is certainly very singular that all these epidemics should have occurred in Italy, and none resembling them met with elsewhere Whatever their origin, the facts are of the deepest interest, a number of children affected at one time with syphilis, these infecting their nurses and mothers, the mothers infecting their husbands, the children infecting one another by the act of kissing, or by the spoons used in feeding and whole families infecting one another by merely being huddled together in confined and crowded dwellings For it must not be supposed that only persons who were at the time the subjects of vaccination were the sufferers Various epidemics of this kind, quite as singular and quite as inexplicable, have occurred under circumstances entirely unconnected with vaccination, and indeed before vaccination was heard of * * * In the five epidemics specified in the beginning of this paragraph, a vaccinal origin was alleged, and this was made in the Rivalta case the subject of careful inquiry by a scientific commission Unfortunately, however, the inquiry did not take place till four months after the outbreak, and as in no single case of the children said to have been syphilized by vaccination had any application been made to a medical man on account of the condition of the arm, facts and dates on the exactitude of which everything depends had to be got as they could at such distance of time from the testimony of the villagers, for the most part ignorant and prejudiced Under these circumstances, it is not surprising that different conclusions were arrived at, and though Dr Pacchiotti and the other commissioners, after a most careful and painstaking inquiry, reported themselves satisfied of the vaccinal origin of the disease, Sperino, who also went to Rivalta and there investigated the circumstances, and treated some of the cases afterward at Turin, was equally satisfied that their origin was independent of the vaccination The story, as regards the vaccinal origin, is this A child (Chiabrera) apparently in good health, but really incubating syphilis, was vaccinated with some lymph obtained in a tube, this child's arm was used on the tenth day for the vaccination of forty six children, and one of these forty six children, named Manzone, again on the tenth day furnished lymph for vaccinating seventeen children Of these sixty three children, forty six had within two months a disease considered by the commission to have been syphilis—the syphilitic symptoms having manifested themselves in some cases within ten days, and as a mean at twenty days from the vaccination Now, in explanation of these events, can we admit that the matter taken from Chiabrera's arm contained the contagion of the constitutional syphilis, which at these intervals of time the children manifested? Not, assuredly, unless we are prepared to give up all we have been taught as to the incubative period of constitutional syphilis For it would have required from three to five weeks for that disease to manifest its primary symptoms [Lee gives the period of incubation at from three to seven weeks Rollett gives a mean of twenty six days, and out of a large number of cases there was only one case in which it was under fifteen days In four cases, in which the inoculation was by blood, the minimum was twenty five days and the maximum thirty five As recent testimony on this point, it is proper to state that Hutchinson says, "The period of incubation, prior to the first specific induration, will usually be five weeks"[43]] But if this teaching has been erroneous and true constitutional syphilis can produce its primary symptoms within ten days, then indeed, we can understand how, if syphilitic matter was mixed with the lymph, either in the original tube or through the lancet employed in Chiabrera's vaccination, an irregular vesicle might result, such as that stated in Sperino's experiment with soft chancre, which Baumés and Viennois held to contain the two viruses mixed It must be remembered that we have no reliable account whatever of what was the sort of vesicle or result on Chiabrera's arm, from which the so called vaccinations were done From such a result as Sperino's experiment affords, a careless man might, a careful man would not, take what he called lymph, and I have very little faith in the proceedings of any one who evidently habitually used tenth day cases We might not really, then (that is, supposing the incubation difficulty got over, which it must be, or else the Rivalta cases as connected with vaccination fall of themselves) have any difficulty in accounting for the propagation of syphilis, for hard and soft chancres would fall in the same category But we should have more hesitation as to whether vaccinia also might be communicated at the same time, and, in fact, in what degree the Rivalta children who were syphilized were also vaccinated, it is impossible to say I can quite conceive that if the vesicle on Chiabrera's or Manzone's arm was all like that produced in Sperino's experiment, some spurious vaccin result might follow in some of those vaccinated from them There is certainly no satisfactory evidence of any of the children ever having had regular vaccinia"

(To be continued)

SOCIETY PROCEEDINGS

Chicago Academy of Medicine

The regular meeting of the Academy was held Oct 15, 1896

Dr W XAVIER SUDDUTH acted as Chairman

The subject of "Infantile Paralyses" was discussed from various specialistic standpoints Dr ROSA ENGELMANN opened the debate by first exhibiting a a porencephalic brain, obtained from a babe seven months old upon whom a craniectomy was performed by Dr Alexander Hugh Ferguson She showed photographs of the asymmetric head, site of the operation and pathologic intracranial cysts, as well as specimens of the brain, spinal cord and vertebral canal, from which the nerve exits and plexuses are demonstrated, for it was at first believed that these were absent, impossible as such a condition seemed The cord itself presented no cauda equinus and was undeveloped

Dr ENGELMANN then discussed the

CONTAGIOUS AND INFECTIOUS DISEASE ETIOLOGY OF INFANTILE PARALYSIS

That a relation between the infectious and contagious diseases to cerebral, spinal and terminal palsies does exist is undisputed, but what that relation is, is only explained in general terms No answer is given as to the reason of such comparatively uniform action upon nervous structures by such widely differing bacterial or noxious agents as syphilis, tuberculosis, smallpox, typhoid fever, scarlatina, purulent affections, pneumonia, measles, diphtheria, etc Why a poliomyelitis or neuritis should be a sequela to these diseases on the one hand, and, on the other, be an independent entity of a presumably specific origin, is inexplicable Of course, we recognize the immaturity and consequent instability of infantile nervous structures as a predisposing factor, but a wider and more accurate knowledge is dependent upon future neurologic research and accomplishment A discussion by the members of this Academy upon a history and specimen of a case of porencephalia in a babe seven months old may throw some light upon this evident congenital condition so often associated with cerebral palsies and acquired infantile cerebral palsies

The brain was obtained after a craniectomy done for me by Dr Ferguson There was a microcephalic state, as shown by the photographs, but I should have recognized other pathologic conditions and known of the uselessness of surgical interference □However, had no operation been done, no postmortem could have been obtained, and a valuable specimen and knowledge of great service to me would have been lost The history is as follows Parents Russian, father healthy, no history of nervous diseases, alcoholism or syphilis Maternal grandparent consumptive, mother undersized, with a pronounced dorso lumbar kypho scoliosis and rachitic pelvis Measurements made by Dr Rachel Yarros, as follows bi iliac, 21 c c, anterior superior spine, 20 c c, external conjugate, 11 c c, anterior conjugate, 9 c c The very prominent synchondrosis was found about two inches to the left Married at 20 Three children born at term and without difficulty, with the assistance of a midwife No miscarriages Two children died at the ages of four and eleven months respectively of pneumonia and summer complaint One living healthy child of 3½ years, subject to fright and hardships while carrying the youngest child, was sick in bed three months, complained of pain in the side, could not walk She also gives a description of sudden and copious white discharge, in the nature of a flooding, possibly the breaking of an abscess during this state Labor was prolonged and the physician told the husband it was a cross presentation Instrumental delivery Child asphyxiated for twenty minutes and to all appearances dead The father said the baby's left arm was broken, because the physician put it in a splint At the seventh month the child was brought to me, showing marked asymmetry of head with a deep left parietal depression, occipital depressions and elevations—in fact, great irregularities and absolute cranial synostosis Some facial asymmetry, but no observable facial or general paralysis History of convulsions since its second week, increasing in frequency and severity until almost constant, beginning with the ocular and facial muscles and becoming general Strabismus, blind and seemingly deaf, idiotic Perfect body development without other anomalies The child came to me with a history of cranial deformity from forceps injury, but upon noticing the synostosis, I said that the condition was congenital, and there was a conformation of the skull cap due to intra uterine pathologic cerebral conditions The operation and postmortem proved the correctness of this view On chiseling, the bone was found much hardened and thickened, especially at the sutures A cyst was noticed and thought to be hemorrhagic by the operator, but the child was so collapsed that the opening of it was left for a second operation The child died two hours after the operation The brain was removed, and I now present it to you for inspection The cord pulled up from the canal was at first thought to be without spinal nerves A postmortem was made later which demonstrated their presence The organs were found normal The only demonstrable pathologic condition was enlarged mesenteric glands, which looked tubercular There were adhesions of the coverings to the brain, and these and the cerebral tissue when fresh showed decided inflammatory changes, and pointed markedly to a fresh meningo encephalitis The sclerosis and atrophy were doubtless due to previous intra uterine lesions

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[43] Rollett's *Traité des Maladies Vénérienne*

As to the cause, the question of pressure during pregnancy can be excluded by reason of the transverse position It does not seem plausible that labor or forceps pressure produced this condition of sclerosis and atrophy that must have been preceded by intra uterine acute inflammatory conditions of long standing, and due possibly to a pus infection in the mother previously mentioned, instead of developmental reversion The future may show that teratologic conditions have their origin in active fetal disease

Were there prenatal circulatory disturbances, hemorrhages or inflammatory disease of the middle cerebral artery, or obliteration early in fetal life, or an intra uterine polio encephalitis producing this terminal condition of sclerosis and atrophy? Was the synostosis due to the agenesis or vice versa? Ziegler inclines to the former view He says "In partial defects the skull cap is most often closed, giving rise to free spaces filled by fluid " Was this agenesis due to active intra uterine disease or to developmental arrest or perversions, or both?

SYPHILITIC ASPECT OF INFANTILE PARALYSIS

Dr Wm L Baum—The syphilographer is not frequently called upon to see cases of infantile paralysis When it is considered that between 75 and 80 per cent of the children suffering from hereditary syphilis are born dead, or die before the end of the third month, we can readily see how few cases of hereditary syphilis there are in comparison with the supposed number The lesions of the nervous system in these cases differ but slightly from those in the acquired type, and many of the so called pathognomonic signs of syphilis are not, strictly speaking, syphilitic manifestations, but symptoms of a dyscrasiæ which may differ widely from syphilis The specific lesions most frequently met with in infantile paralysis are most often confined to the cortical substance and meninges of the brain However, occasionally there are lesions occurring in the bony capsule which indirectly affect the nervous manifestations, and then the lesions also found in the medulla and cord The specific disease itself gives rise to congested conditions which are subsequently followed by atheromatous conditions of the cerebral arteries These are frequently followed by the development of smaller thrombi or miliary aneurysms The formation of these thrombi or aneurysms, especially the rupture of the latter, gives rise to various paralyses which are met with in children In those cases which are due to the formation of a thrombus the paralysis is gradual in its onset Where it is due to a rupture of a small miliary aneurysm, the paralysis is more sudden In both classes we have excellent results from treatment—rapid resorption and retrogressive changes to the normal In the cases, however, where there is a true sclerosis, also accompanied at times with the formation of a thrombus or rupture of a miliary aneurysm, there is softening and a true destruction of nerve tissue These cases show no improvement from treatment

The general practitioners and syphilographers are frequently misled into an erroneous diagnosis of the syphilitic origin of infantile paralysis upon the strength of the results obtained by therapeutic measures It is too frequently forgotten that iodids and mercurials are of great benefit in a great many diseases of non specific character and when these individuals recover as a result of the administration of these anti syphilitic remedies a diagnosis of syphilitic disease is made This is certainly a mistake, for if there are no other corroborative evidences of a syphiltic disease present, we are not justified in calling the symptoms, which may have a widely divergent origin, syphilitic

Fournier has reported a number of cases of syphilitic paralysis, in one of which there was enlargement of the lumbar vertebra, followed by paralysis of both legs This condition subsided rapidly upon the internal administration of anti syphilitic remedies While syphilis is an etiologic factor in infantile paralysis occupies an important place, care should be taken not to put too much reliance upon such a diagnosis without more apparent corroborative evidences of the disease being present

OBSTETRIC ASPECTS OF INFANTILE PARALYSIS

Dr C E Paddock—There are only two forms of paralytic affections occurring in childhood which are common one of these is known as spastic infantile paralysis and the other as infantile paralysis or essential paralysis of children, or scientifically as antero poliomyelitis One lesion is in the brain, the other is in the cord Of the cerebral palsy we have probably more to do in so called birth palsies Injury to the newborn during parturition with subsequent paralysis is more frequent than one is led to believe without referring to the literature upon the subject Rupture of a blood vessel in the brain or the meninges in a child results from different causes but in the obstetric sense by the application of some extraneous force A contracted pelvis, protracted labor, or instrumental delivery is equivalent to a traumatic injury to the skull and brain, that is, the result is the same, leading to a hemorrhage, usually into the meninges Protracted labor and not the forceps is the cause of greatest danger to the child's brain First born children are most apt to suffer, owing to the fact that first labors are, as a rule, harder and longer Gowers found that in twenty four cases of meningeal hemorrhage seventeen were first-born

The apoplexy of the newborn is, according to Osler, McNutt and others, one of the chief causes of the bilateral hemiplegia or paraplegia occurring at birth The fact that protracted labor is often the cause of paresis in the newborn is now generally acknowledged Whatever may be the cause of the delay the head is being compressed upon in all its circumference, the vessels become engorged and a rupture of some of the smaller vessels of the meninges necessarily follows with their consequent result What percentage of cases of paralysis in the newborn is the result of injury at birth I am unable to say, but I honestly believe that many cases which are referred to other causes are really birth palsies We have been taught in former days to delay the use of the forceps until such a time as danger is imminent to either mother or child, and here is where a great mistake has been made when the labor has been so protracted that the heart indicates impending asphyxia then, as rule, we are too late, for the child will either be born dead or born asphyxiated, resuscitated only to live a few days or a few weeks One should not wait until such a time has arrived, but be able to know just the proper time to apply the forceps, and this can only be accomplished, unfortunately, through a great amount of clinic experience The forceps is in the most skilled hand a dangerous instrument, but its dangers decrease with the skill which is acquired in its use A student goes out into the world to practice never having applied the instrument, and in his ignorance he does an incalculable amount of mischief The principal danger in the use of the forceps is in the high operations Thanks to Tarnier, we have the axis traction forceps which has reduced the terrors of a forceps operation to one of extreme simplicity The neglect in the treatment of breech presentation affords us many examples of infantile paralysis The traction which is often resorted to to terminate a breech results in an injury to the cord with the subsequent poliomyelitis Too much traction upon the over congested cord and compression upon the after coming head with hemorrhage at the base of the brain into the cavity of the arachnoid causes an effusion into the same cavity lower down, resulting in a spinal paralysis

What is the treatment of these conditions? A more thorough knowledge of obstetrics is necessary No branch of medicine requires such a thorough knowledge of medicine as obstetrics Emergencies are continually arising which call for prompt action Most any physician considers himself capable of conducting an obstetric case, and why? Because he has been taught that 96 per cent of the cases terminate favorably In this 96 per cent however, cases of infantile paresis are not considered that can often be traced to his negligence I have a fair idea of the operation for inguinal hernia, still I do not consider that I am justified in operating upon such a case neither do I consider that every man simply because he has an M D to his name is justified in conducting an obstetric case So soon as physicians realize t [illegible] trics is [illegible] that tracted labors are dangerous, that the forceps is an instrument of traction, not compression, so soon will the cases of infantile paresis due to mismanagement of obstetric cases be diminished

CLINICAL ASPECTS OF INFANTILE PARALYSIS

DR DANIEL R BROWER—The clinic aspects of the several forms of infantile paralysis are so familiar to every Fellow of this Academy, that I will not reiterate them on this occasion I have here a series of photographs which I think will supplement very well the admirable paper and specimens presented by Dr Engelmann These photographs are those of a family of infantile cerebral palsies The mother of these children is a very robust woman, who does her own work and takes care of these helpless children She is 31 years old and never had a miscarriage The parturitions of these several children were all normal The father is 49 years of age, thin and very anemic *He has been a painter since the age of 14*, has had no attacks of lead colic or other evidence of lead poisoning, has no history of syphilis, but has had numerous attacks of malarial fever, and has some stigmata of degeneration There are four children, all boys, three of them are diplegics, the other one is well with at least the ordinary intellectual and physical capacity of a boy of three and a half years The three children show the classical symptoms of mental defect—rigidity, contracture, exaggeration of reflexes and clonus, choreic and athetoid movements, and a slight amount of atrophy The oldest child is 10 years old The two photographs, one front and the other back view, show the characteristic attitude of the disease This child became diplegic at about two years The next child is 5½ years old and became diplegic about the same time The next child is 3½ years old and is well The youngest child was 15 months old when this picture was taken about one year ago, and has since become diplegic There has been no convulsion in any of the cases and the development of the paralytic symptoms has been gradual I am watching the cases with great interest, hoping after a while to be able to unravel the mystery that thus rendered helpless three out of four children, the offspring of parentage fully equal to the average of their station

EYE SYMPTOMS IN INFANTILE PARALYSIS

DR WM H WILDER—There are so many conditions of the brain in children that may give rise to paralysis of the muscles of the eye or to paralysis of the optic nerve, if I may so term it, that one can only touch upon them briefly I shall first speak of congenital defects of the muscles of the eye We are all familiar with cases of ptosis in children, but we are not so familiar with congenital paralysis of one of the extrinsic muscles of the eye A short time ago I presented such a case to the Chicago Medical Society, in which there was congenital paralysis of the external rectus The girl was 22 years of age There was no abductive power of the right eye, and this, according to the statements of the mother, had been the condition since birth Such cases are rather infrequent It can not be positively said however, that the paralysis is always due to some central lesion, such as defective growth of the nucleus We have just as much right to assume that it is due to defective development of the muscle Two cases are on record, reported by Seiler in which, on examination, he found absence of the superior rectus and the inferior oblique muscle of the right eye, and of the inferior oblique of the left eye In the second case there was absence of both oblique muscles in the right eye, and in the left eye absence of both oblique muscles and the superior rectus It is possible that the difficulty is due either to total absence or to defective development of the muscle However, in most cases of congenital ptosis that we see there is probably some defective growth of the nuclei in the fourth ventricle that innervate these muscles In other words, they should be considered nuclear palsies of congenital origin

When we come to acquired infantile paralyses we reach a large field Almost any disease that will bring about paralysis of the extrinsic or intrinsic muscles of the eye in adults may occasion it also in infants Trauma may be the cause of paralysis of any of the muscles of the eyeball either directly or because of a blood clot pressing upon some of the nerves A tumor in the orbit or immediately back of it would give a similar result

One of the most common causes of paralysis of the ocular muscles in children is either pachymeningitis or leptomeningitis, and naturally we should expect such paralyses to be more frequent with inflammations affecting the meninges of the base of the brain than with those confined to the convexity Consequently ocular paralysis is a common occurrence in tubercular meningitis, and may be one of the early signs of the same The child may show a pronounced squint, and if old enough may complain of diplopia This is not necessarily due to loss of power of any one muscle, but may be caused by a spastic contraction of one or more of them, a condition that may subsequently disappear Pressure upon the nerves either by tubercle masses or exudate may be accountable for this, although in some cases the cause must lie in a neuritis set up by the irritation The same cause may bring about partial or total loss of sight if the optic nerve become involved as it frequently does But the physician should be cautious about attaching too much importance to amblyopia in a case of suspected meningeal or brain disease, for such amblyopia may be congenital or caused by a high refractive error, and only to be detected by a careful ophthalmoscopic examination or some other objective test In children the chronic form of nuclear palsy of the ocular muscles is not so frequently seen as in adults, in whom syphilis so often acts to bring about the condition Dr Baum has correctly stated that congenital syphilis plays an insignificant rôle or no rôle at all in this disease Hutchinson in his famous memoir does not cite a case of congenital syphilis having caused paralysis of the eye muscles in children and his opinion is also held by Mauthner and other observers But closely allied to the nuclear palsy of adults is the condition described by Gowers by the name infantile oculo facial palsy To this class probably belong many of the cases of ptosis and paralysis of individual ocular muscles that are congenital or that appear in early life In this condition there will be associated with palsy of one or more muscles of the eye a paralysis of one of the facial muscles or jaw muscles There seems to be a peculiar connection in some persons between the center that innervates the levator palpebrarum and the center that innervates some of the muscles of the jaw Cases are not altogether infrequent in which patients having a ptosis are unable to raise the lid unless they make a corresponding effort to open the mouth It seems as if the impulse that is sent to the levator palpebrarum is, at the same time, sent to the depressors of the lower jaw This would seem to explain why in some cases of oculo facial paralysis we have a simultaneous or coincident paralysis of one of the maxillary muscles together with the muscles of the eyeball

It is singular that in conditions of intra cranial hemorrhage or spastic paraplegia of infants that we should not have more trouble on the part of the eye, because we have a blood clot in some cases pressing upon the convexity of the brain, sometimes reaching back and pressing upon the occipital lobe Gowers *mentions having seen but one case of complete blindness* in such condition Little mentions no eye symptoms in connection with it Unless a clot should be on the occipital lobes and press upon the sight center, we should hardly expect any manifestation on part of the eye We have in some febrile diseases serious disturbance of the ocular muscles In diphtheria we are all familiar with the paralysis of accommodation that occurs, usually following the paralysis of the muscles of the palate This may occur in connection with paralysis of some of the extrinsic ocular muscles For instance, a case was reported in 1885 by Uhthoff in *Neurologisches Centralblatt*, in which there was complete external as well as internal ophthalmoplegia, and a short time after Mendel reported one very similar In these cases we must suppose that some poison acts directly upon the centers in the fourth ventricle In Mendel's case, which went to autopsy, there was found considerable congestion around the nuclei of the nerves, the capillaries were much ingested, and there was a tendency to softening of some of the nerve centers

(To be continued)

PRACTICAL NOTES

Infection from Circumcision —The *Semaine Médicale* describes a case of tuberculous infection of the testes in an otherwise healthy child of healthy Jewish parents The infection was traced by a physician to the priest, who was found to be a confirmed consumptive, and who performed the rite of circumcision

The Use of Dry Heat of High Temperature in the Treatment of Chronic Joint Affections —Dr Wirt's apparatus consists of a copper drum twelve inches long and nine inches in diameter, fitted at each end with a wooden ring and a hood of thick rubber Having protected the back of the knee with cotton, it is enclosed in the apparatus and heat applied to the outside by means of a Bunsen burner Most patients will tolerate a temperature between 250 degrees and 300 degrees F , provided three holes were made in the drum to secure proper ventilation and keep the air dry This treatment gives an immediate relief to pain and increases temporarily the mobility of the joint.—*St Louis Med Journal*, October

Improved Method of Fastening Plaster Corsets —Gendron recommends the use of strips of zinc, one mm thick, three wide and as long as the corset Two are cut at intervals of two cm in oblong spaces across the strip, and the oblong piece cut out on three sides, but left connected by one of the small ends, and raised up like a trapdoor An unperforated strip is placed on the median line of the thorax and the layers of the plaster bandage applied On each side of this strip and at a distance of several centimeters the perforated strips are sunk in the plaster in the center of its thickness, the projecting raised pieces standing up out of the plaster After the corset is thus applied, the projecting pieces are bent down to form hooks, which enable the corset to be laced up firm and tight —*Semaine Méd* , September 30

Injection of Iodoform camphorated Salol in Chancrous Bubo — The *Gazette Méd de Liège*, October 1 describes the prompt cicatrization of eighteen cases of chancrous bubo treated by a French army surgeon with an injection into its depths of $^1/_3$ to $^2/_3$ Pravaz syringe of 1 5 per cent iodoform camphorated salol After the needle is withdrawn the hole should be stopped with the finger to prevent the escape of the fluid, and afterward painted with collodion The incision is postponed until the following day, when all the gelatinous pus is forced out by pressure A little mercurialized water at 1 to 1,000 helps to empty the pocket, which is then plugged with gauze dipped in the salol The pus is removed again the next day and a second plug inserted After this the bubo heals rapidly , the pain, swellings, etc , gradually disappear and the cicatrization proceeds regularly The fifth day collodion is applied and the cure is complete by the eighth day, leaving a scarcely visible scar with the skin loose

Diagnosis of the Possibility of Resuming Growth in Cases of Arrested Development —Dr Hertoghe of Antwerp, announces that growth can be resumed in all cases where the skeleton is not completely ossified, or as long as the bones retain their original cartilaginous character He has been studying three classes of arrested or delayed development Myxedema hyperazoturia and rachitis, simultaneously with the administration of thyroidin The most interesting part of his tests is that he diagnoses the cases first by means of radiography, which accurately determines the progress of ossification, and his diagnoses have been confirmed in every instance by the results of the treatment In myxedema the ossification is tardy, and patients with this disease resume therefore their growth upon the administration of thyroidin One of his cases was a young man of 27, who measured 1 37 meters in April, 1895, and has gained $1^1/_3$ inches (33 mm) since then, and is still growing The radiograph clearly showed in this case the distinct light zones in the phalanges revealing thus their incomplete ossification and the possibility of a resumption of growth in spite of his advanced age Cases of hyperazoturia also present a marked lack of ossification, and therefore are able to resume growing , but in rachitis, on the contrary, the bones ossify very early and no further growth is to be expected —*Semaine Méd* , September 30

Treatment of Yellow Fever —The editor of the *Tribuna Médica* of Rio de Janeiro, No 10, announces that he has found that the tincture of eucalyptus, administered promptly and in large quantities, has a marked effect in attenuating the severer symptoms of yellow fever He reports thirty one cases treated with it, and only three deaths, which were each probably due to the ignorant and careless attendance the cases received Very large doses can be borne as much as 30 to 40 grams in twenty four hours, with frequent enemas of 30 grams in a liter of water It seems to have an especially powerful effect on the kidneys, and prevents the usual anuria *O Brazil Médico* of August 1, also states that it has been the experience of Dr Costa, who has been at the head of a hospital in Brazil for twenty four years, that few if any cases of yellow fever were fatal that were accompanied by suppurated parotitis The suggestion is made that this might be produced artificially, and Fochier produces abscesses with turpentine, to prevent or modify purulent transformation of pneumonic exudates

The Dangers of the Operative Treatment of Enlarged Prostate — Dumstrey, in *Centralblatt fur Chirurgie*, records a case of enlarged prostate treated by ligature and resection of the vas deferens, which shows that this operation can not be regarded as a simple one and free from risk A man, aged 65, in all other respects strong and healthy, came under the author's care with complete urinary retention and severe cystitis due to considerable prostatic enlargement Partial resection of the vas deferens on both sides was followed in the course of a few days by decided relief of the local symptoms, the man being able to pass urine spontaneously and the urine becoming much less turbid and containing day by day less pus and blood The prostate, which just before the operation had been as large as a fist, was reduced in size by about one half These good results, however, were associated with serious impairment of both the physical strength and the mental condition of the patient He speedily presented the appearance of a very old and feeble person His movements became slow and clumsy, and he was unable to comprehend what was said to him and also to express his own thoughts After an interval of about a fortnight his condition commenced to improve, but the change for the better was very slow and gradual

Location of Foreign Bodies in the Eye with Roentgen Rays —Dr Clark, Columbus, reported at the recent meeting of the American Ophthalmological Society at New London, a case in which the presence of a small fragment of metal in the extreme angle of the anterior chamber and the iris where it could not be seen, had been determined by radiography The sensitive plate had been introduced into the adjoining nostril, the patient being put under ether, and the rays directed upon it through the eye from the temporal side He also suggested that the plate could be placed in the cocainized conjunctival sac, or an opening could be made in the conjunctiva and the small plate slipped behind it He believed that this method of locating a foreign body in the eyeball was perfectly practicable especially if the particle were lodged anteriorly, as in the ciliary region, where it could not be seen with the ophthalmoscope Dr Williams, Boston, reported a case in which a fragment of the copper case of a cartridge had passed through the cornea and lens Nothing could be seen of it and it was not certain that it was in the eye The use of the X rays showed the presence of the fragment, and it was removed The radiograph was obtained with ten minutes' exposure by laying the patient's head with the side of the injured eye upon the plate, and placing the Crookes' tube above and rather in front of the patient's head —*Ophthalmic Review*, August

Chronic Membranous Bronchitis —Clausse says that the nature of chronic membranous bronchitis has been but little studied, and gives the results of a bacteriologic examination of the membrane from a patient who had expectorated bronchial casts for several years Cultures showed an inconstant and small number of staphylococci and various forms of bacilli, but the only microörganisms found in abundance and in all tubes which did not prove sterile, were streptococci Cut sections showed the presence of various microbes on the surface of the false membrane, probably through contamination by the saliva, but in its center only streptococci were met with Fragments of introduced into the bronchi of animals or beneath their skin, produced practically no reaction, while inoculation experiments made with cultures of the germs were equally negative, yet, in spite of their lack of virulence, their constant presence shows that they were not a mere accidental coincidence, but that the disease was due to a chronic infection by them Anti streptococcic serum was tried with apparent success, the patient leaving the hospital in better condition than she had been for years —*Boston Med Journal*, October 8, from *Comp Rend Soc de Biologie*, April 3

Intra cervical Injection of Glycerin, a Modification of Pelzer's Method of Inducing Premature Labor —Helme improves on Pelzer's intra-uterine injections by introducing the nozzle of the syringe into the cervix alone, and describes with enthusiasm in the *Lancet* of October 3, the success of this treatment in two cases The important points are 1, that the intra cervical injection of glycerin produces a rapid and progressive dilatation of the cervical canal, 2, that at the same time the lower pole of the ovum becomes detached from the lower uterine segment, 3, that the intra uterine injection of glycerin between the detached portion of the membranes and the uterine wall may be carried out without fear of puncturing the membranes or of interfering with the placental attachment and 4, that labor is effectually induced As to the manner in which glycerin acts Pelzer offers the three following suggestions 1, it acts as a direct irritant of the uterine surface, setting up muscular contractions, 2, it acts through a mechanical separation of the membranes, and 3, its hygroscopic action causes a transudation of the liquor amnii, the ovum becomes smaller and is detached from the uterine wall, there is at the same time a contraction of the uterus upon its diminished contents But in addition to this power of setting up uterine contraction careful observation shows that glycerin possesses the power of causing dilatation of the cervical canal before contractions of the uterus, which are appreciable to the patient or the physician, are set up The injection of pure glycerin into the cervical canal is followed by immediate softening and relaxation of the cervical tissues with dilatation of the cervical canal, and this result seems to be too rapid to be the result of muscular action In one case of rachitic pelvis, four injections of 1 ½ ounces glycerin were made in eight hours with a fifth of three ounces the next morning Labor was shorter and recovery more rapid than ever before

Surgical Treatment of Tuberculosis of the Bladder — Greiffenhagen describes in the *D Zts f Chir* 3, a case of tumefaction of the bladder in a man of 47, whose urine contained blood and numerous Koch bacilli There was great pain and emaciation, with incontinence of the urine Clinical examination showed a tumor the size of a nut, a little above the symphysis pubis, which ascended or descended according to the quantity of urine in the bladder A similar tumor was situated also on the anterior surface of the bladder, and the external orifice of the urethra was also the seat of another, the size of a cherry There was also a hard swelling in the membranous part of the urethra The prostate was large but *not painful*, while the lower part of the bladder was intensely painful to pressure After several weeks of creosote medication—local treatment being impossible on account of the sensitiveness of the patient and the smallness of the urethra—a vast tumefaction formed in the perineal region, combined with complete retention of urine, which demanded surgical intervention After opening the abdomen on the median line, a multitude of small cavities were encountered, filled with a cheesy pus, and communicating with the urethra An opening was made into the fundus of the bladder and a large drainage tube inserted, after which the peri urethral abscesses were curetted out and iodoform gauze applied Five weeks after the operation the Koch bacilli had entirely disappeared from the urine A permanent catheter was introduced into the urethra after dilation The perineal wound healed, the tumors in the vesical wall and at the orifice of the urethra retroceded, and the general health continued to improve A year has passed since of perfect health for the patient, a farmer, who has pursued his usual occupations Greiffenhagen adds that such cases should more frequently be handed over to the surgeon, whenever instillations of sublimate and injections of iodoform fail to relieve —*Sem Méd*, September 30

Serum Diagnosis of Typhoid Fever —It has been shown by Pfeiffer of Berlin, and Widal of Paris, that the serum obtained from the blood of a patient suffering from typhoid fever is capable of so acting upon pure bouillon cultures of the typhoid bacillus mixed with it as to abolish the active motion characteristic of that organism in fluid culture media and cause an agglutination of the individual bacilli into large groups or clumps This change is easily recognizable under the microscope, or in culture tubes, and usually occurs within a few minutes It has since been shown by Dr Wyatt Johnston, bacteriologist of the Provincial Board of Health of Ontario, that the fluid obtained by moistening with water a dried blood drop gives the reaction in a prompt and satisfactory manner, even after it has been dried for several days This modification of the process makes it suitable for a system of free public laboratory diagnosis, similar to that in the case of diphtheria, as a drop of dried blood can be readily sent to a laboratory for examination Dr Johnston was able to diagnose the presence or absence of the disease correctly by means of dried blood drops sent by mail from Montreal, Canada, to Buffalo, N Y, during the recent meeting of the American Public Health Association To test the practical utility of the method the Board of Health of Ontario has issued a circular in which it offers to examine and report upon any samples of blood sent by physicians of the province The blood is to be taken from the finger tip or lobe of the ear, after thorough cleansing of the skin, by pricking with a needle previously sterilized by heating over a lamp or gas flame The drop is to be absorbed by a piece of sterilized paper which is furnished in an envelope by the board, with directions for its return A report is promised by 2 P M of the day following that on which the sample is received and will be communicated by telephone when the number is given By this systematic investigation the board wishes and expects to obtain data on, 1, the proportion of cases in which a correct diagnosis can be made by the serum test, and the relative efficiency of the method of employing dried samples, 2, the earliest period in typhoid fever at which this method can be expected to give indications, 3, the length of time for which it persists after convalescence, 4, the existence of any relation between the intensity of the reaction with the test and the course of the disease, 5, the study of the nature of the obscure febrile conditions, clinically termed gastric fever, continued fever, abortive typhoid, bilious fever, typho malarial fever, etc, about which our present knowledge is very meager and unsatisfactory The board is especially desirous of hearing promptly of and re examining any genuine typhoid cases in which the method is not successful In case of negative results, it is desired that after a few days an additional sample should also be sent consisting of a few drops of blood collected in a glass tube which will be furnished on application With reference to the effect of drying the samples it is observed that while this may lessen slightly the delicacy of the reaction it has the practical advantage of obviating a serious source of error, namely the contamination of the sample and the subsequent growth of putrefactive bacteria This is of special importance in the care of samples having to be sent long distances No doubt other boards of health will take up this subject and aid in the advance of our knowledge of typhoid fever and other febrile conditions

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INFORMATION WANTED

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second class mail matter not having street address, would be placed in the general delivery to await call

SATURDAY OCTOBER 31, 1896

PHYSIOLOGIC TREATMENT OF NEURASTHENIA

Dr DAVID RIESMAN, of Philadelphia, closes up a well considered article on neurasthenia in the *University Medical Magazine*, September, by a scheme of treatment that embraces medicinal, hygienic and dietetic recommendations

1 Medicinal treatment can not be a matter of routine, but there are few remedies that are of benefit in a large number of cases

At the head stand the bromids, of which he generally employs the sodium or potassium salt in doses of fifteen grains two or three times a day, strontium bromid, in thirty grain doses, has also given good results, particularly in lithemic cases

The coal tar products, either alone or combined with the bromids, are often of value A remedy, for which much has been claimed but which he has not used, is spermin The animal extracts have been employed, but it is questionable whether the results achieved are not due to suggestion

Special conditions will naturally demand a modification of our treatment Insomnia needs often to be combated, frequently a hot sponge-bath before retiring, or the application of hot towels to the face, is sufficient to encourage sleep When drugs must be employed, we resort to bromids, sulphonal trional or hyoscin, never, if possible, to morphin Marked lithemic conditions are corrected by the use of alkaline mineral waters, the lithia salts, or by piperazin and its congeners

In nervous dyspepsia, in addition to regulation of diet, suitable remedies may be administered The mineral acids are of value in some cases, antiseptics and sedatives, such as bismuth subgallate, in others The constipation is treated by the customary methods

2 Dietetics —The diet in neurasthenia should be nutritious, it has no special limitations except when the rest-cure is employed or when distinct indications are present The patient's idiosyncrasies must be considered If anemia exists beef, eggs and milk are given in abundance, in lithemic cases the meats are restricted, and alcoholic beverages as well as rich articles of food are excluded from the dietary

For nearly all cases coffee and tea seem to be harmful, and he has been in the habit, perhaps with too strict an adherence to routine, of always forbidding their use

If symptoms of nervous dyspepsia are present, the sugars and starches should be as much as possible eliminated from the diet, the patients often do well when placed on rare meat, stale bread or gluten bread and milk Milk is especially valuable in cases suffering from gastralgic attacks

3 Among hygienic measures the most important is rest, prolonged rest is to the neurasthenic patient what the nightly sleep is to the healthy man In severe cases it is necessary to adopt the so called rest cure, or Weir Mitchell treatment, consisting of rest in bed, massage, electricity and liberal feeding This may bring about a cure in an apparently hopeless case During the rest cure the patient is not permitted to see his or her friends, is not allowed to read, and is in constant charge of an intelligent, strong-minded nurse

As important as any of the measures adopted, indeed, deserving to be ranked the foremost factor in treatment, is the personality of the physician In no disease is it so essential to inspire the patient with confidence, and in none is so much good accomplished by suggestion alone as in neurasthenia The physician should listen patiently to the almost interminable recital of fanciful ailments, and should always make a careful physical examination to exclude all possibility of lurking organic disease

If the rest-cure is impossible or not indicated, the patient must take a definite amount of rest by lying down for an hour or two in the morning and in the afternoon—this is especially valuable in women

Bathing is not to be neglected The bath should be of short duration and should be followed by a cold shower bath or cold douche, with friction In the so-called sexual neurasthenia, the application of cold water to the spine and the perineum acts as a powerful sedative

A change of climate, such as a sojourn at the seashore, in a retired spot, or a sea voyage of some length, is valuable in many instances

In neurasthenia with disturbances of the sexual functions a combination of bromids and hyoscin is very useful The patient should also be instructed to sleep on his side (this may be accomplished by having him bind a cigar box on the back, or by tying a towel about the waist with the knot behind), and to apply cold douches to the spine and perineum For this class of cases outdoor exercise is very valuable

WATER SUPPLY OF DENVER AND CHICAGO

An increase of typhoid fever deaths in the city of Denver, amounting to nearly 35 per cent in September last over the average for the previous three months as compared with the usual seasonal increase of less than 12 per cent, has been made the occasion of an exhaustive study of the water supply of that city by its accomplished commissioner of health, Dr William P Munn His preliminary report to Mayor McMurray on "The pollution of certain sources of the water supply of the city," and his comments thereon, will be a revelation to other commissioners of health and to other mayors of cities

Dr Munn seriously proposes that the water from all sources of the Denver water supply shall be pure and healthful, even if it be necessary that they be passed through "properly constructed and efficient filters, which shall give an effluent having an average at all times of less than 100 germs per cubic centimeter," and that "if any of the patented processes are adopted for the removal of impurities by mechanical or chemical methods, it shall be a condition that a month's test shall show an effluent at all times containing less than 100 bacteria per cubic centimeter, and that the test shall be carried on with the waters of the proposed supply, and that the proposed filter shall be approved by the mayor and the health commissioner, and the tests supervised and accepted by them as satisfactory "

There are communities far more pretentious than Denver—one of them has the honor of being the home office of the Journal—where the permissible limit of the bacteria is ten times this number, and where the records show more than seventy times this number as an actual average

In his report Dr Munn shows, as has been shown by others, that typhoid fever prevalence follows the pollution of the water supply, that it subsides with the improvement of the supply, and that "the great bulk of cases of typhoid fever in all epidemics is due to the one common cause—an infected water supply " He adds "When the probable sources of that infection are discovered, it is the plain duty of those upon whom the responsibility lies to suggest the remedies Failure to adopt the remedial measures that are necessary means deliberate acceptance of responsibility for the resultant loss of human life "

The Journal begs to commend this utterance, which will be endorsed by every sanitarian in the country, to the prayerful consideration of the civic and educational authorities of the city of Chicago, where the death rate from typhoid fever is again becoming the highest in the world

TABLET MEDICATION

The "tablet fad," as some of our pharmaceutic friends choose to call it, appears to have come to stay. The convenience, cleanliness and presumably accurate dosage of the preparations recommend them readily to the practitioner, and at the present time there is hardly a doctor's office where the familiar glass stoppered bottles and labels of the different manufacturers are not to be encountered They have undoubtedly affected the druggists' business to some extent, and have perhaps also modified medical practice, how materially is a question to be settled in the future That they are the unmitigated evil that some pharmaceutic writers hold, is doubtful, but that their extensive adoption as a mode of drug-dispensing by physicians has in it possibilities to be deprecated, is pretty nearly certain In their present development, it may easily happen that with some they may induce an indolent or careless therapeutic method—that ready made shotgun prescriptions may become popular and an actual evil It is easy also to see how, without any standard authority regulating these preparations, there may be some among them that are not only useless but absolutely dangerous combinations introduced to manufacturers and sent out among the profession It may be there are none as yet of this kind that are really of any importance, but we have to reckon with their possibility Certainly there are some among them that are ineffective or uncertain

All the objections to these tablets could, it would seem, be avoided if there were a standard list, made up mainly of simple drugs, a few well tried or rational combinations perhaps included, which could be prescribed if so desired and supplied by every druggist, and which could be combined according to the needs of any special prescription if the physician desired to dispense his own medicine A very large proportion of the pharmacopeia is made up of substances that can very readily be made up into these tablets, the convenience of which is now being daily demonstrated Others that are not thus suitable, but which are now included in the manufacturers' lists, would of course be omitted from the standard list and it would in this way save both physician and patient from being misled into trouble and expense The addition of a class of compressed tablets and tablet triturates to the regular pharmacopeia would not hurt any business more than is being done at present and would regulate what is at present a somewhat irregular, but widespread and popular method of medication and one that has its real advantages and merits

THE NEW YORK STATE MEDICAL ASSOCIATION

Thirteen years ago the New York State Medical Society separated on the code question. Those who believed in the code of the National Society began to hold their annual meetings in New York City, and were designated as the New York State Medical Association. The State was divided into five districts, presided over by vice-presidents, and holding quarterly and semi annual meetings. The regular annual meeting of the Association, at the Mott Memorial Hall, New York City, was held October 13, 14 and 15, and was of more than usual interest. The President's address on "Medical Expert Testimony," was a suggestive, thoughtful study of the subject by Dr. Darwin Colvin of Clyde, N. Y., one of the few living original members of the American Medical Association. Dr. Austin Flint of New York in a special report on criminology dwelt on the injustice of the law forced through the legislature by the labor unions, taking all contract labor from the prisons, leaving the prisoners in idleness and increasing the cost to the State. A symposium on prostatic enlargement and its surgical and medical treatment brought out a very interesting discussion. Among the large number of important papers was one by Dr. E. D. Ferguson, on "Fatal Cases Presumably Due to Intestinal Ptomains," which gave a new meaning to a class of obscure symptoms, and suggested a new field of study that promises brilliant discoveries in the near future. The address on surgery by Dr. Phelps of New York City, was an exceptionally clear philosophic critique of the general progress of surgery and medicine, also a plea for higher ideals of professional life and living. Dr. Sayre's paper "On the Practical Uses of Roentgen's Discovery as Applied to Surgery," illustrated, was of great interest. The program as a whole was very significant of a great evolution in the practice of medicine. Of the forty-five papers and addresses offered, over thirty were devoted to surgery. Many of them were reports and discussions of very formidable operations, mostly by physicians living away from the large cities and centers of learning and doing a general practice.

The post graduate schools are clearly doing a revolutionary work in preparing the general practitioner for surgical operations which were formerly only done by leaders in the profession and at large hospitals. Evidently a decided evolution is building up surgeons in inland towns and villages, competent for ordinary demands of modern surgery. This however, may go too far, as that manual dexterity resulting from daily practice required in certain exceptional operations can only be acquired in the large hospitals. While undoubtedly surgery is one of the fascinating branches of modern medicine, and at present outranks all others in prominence, yet the topics of papers seen in programs of medical meetings, indicate many and probably far more important fields of study. The New York State Medical Association is one of the prominent Eastern societies, whose membership includes many of the leading medical men of the country and whose published transactions are eagerly sought after as representing the advanced studies of medicine.

Yet all medical societies' meetings suffer from the inability of readers of papers to condense and give the listeners the conclusions of their studies only. In an annual meeting of several days duration, outside the addresses on general and special topics, the readers of papers should be limited to conclusions and summaries of their arguments, leaving to the printed page the facts and observations which can be studied at leisure. Often readers of good papers fail to rouse up any interest by faults of tone and address. Many authors appear at their best in print, and should never read their productions. Others are best in impromptu debate and exchange of opinion.

The model medical meeting is yet to come but there are signs of its near approach every year.

THE COOK COUNTY (ILLINOIS) HOSPITAL

The Practitioners' Club of Chicago held a meeting Monday night, under the presidency of Prof. Christian Fenger, at which they discussed the perennial Cook County Hospital question. The speakers were Drs. Steele, Babcock, T. A. Davis, Senn, W. T. Montgomery, Brower, Hamilton, Moyer, Lewis and Wilder. Some curious facts were brought out in the discussion, among others that the members of the staff, with very few exceptions, were the private physicians of the county commissioners, and that the price of appointment was free treatment of the special commissioner and his family, together with the political pull of the incumbent. One of the speakers stated that internes at that institution were in the habit of performing capital operations in emergency cases without waiting for an attending member of the staff, and that they did not hesitate to perform such dangerous operations as amputation of the hip joint. Statement was made that no provision for bedside instruction was at present made at the hospital, and that it was optional with the patients whether or not they were admitted to the clinic amphitheater. One of the members of the staff, while speaking in a manner entirely friendly to the management, asserted that cases of phthisis pulmonalis, even in an advanced stage, were frequently placed in beds alongside of cases of typhoid fever, pneumonia or bronchitis and that no separation of these cases was even attempted, that the temperature of the wards was very badly managed, and as a rule kept entirely too high, and remonstrances on the part of the staff were of no particular avail, as the institution is under the management of a lay "Warden," responsible alone to the county commissioners.

These defects in the largest hospital of Chicago are not creditable to the public, and the necessity for putting the hospital under medical rather than lay supervision has again been demonstrated

At the same meeting a motion to recommend the commissioners to abolish the hospital ticket fee for students was voted down on the statement of Dr T A Davis that this money was used for laboratory purposes Resolution was finally passed inviting the cooperation of the Chicago Medical and other regular societies of the city, to take immediate action this week, *before the election*, recommending that hereafter the regular members of the hospital staff be appointed on the recommendation of the Chicago Medical Society

GETTING RICH "BY DEGREES" IN ITALY

The Rome correspondent of the London *Lancet*, September 19, records the fact that three years ago the sale of bogus degrees had reached proportions in Bologna which incurred the intervention of the police, and their manufacturer is still, it is believed, serving his time in one of the local prisons But the summary example made of him has not, it would appear, proved much of a deterrent At least, from information gathered in Italy the industry is still a paying one, if the number of graduates whose scholastic record is rather dim may be received as a test This time the University which confers the diplomas is not Bologna, but Berne, whose *sigillum magnum* was stolen, or in some way got at, so as to be counterfeited to perfection The alleged thief or forger has been arrested, but the article was not found in his possession and is still to seek So the world is not yet safe against the illicit creation of graduates, medical and other, but chiefly medical, of whom, it seems, there are already nearly three hundred vaunting themselves alumni of the leading Swiss University Scandinavia and Germany boast the majority of such graduates, while there are some fifty or so practicing in or on the English-speaking public in both hemispheres The rest are chiefly to be found in Italy, Austria and the East

CORRESPONDENCE

Glandular Interdependence

Chicago, Sept 25, 1896

To the Editor —In an editorial on "The Vital and Psychic Complications in Castration for Prostatic Hypertrophy" which appeared in the Journal of Saturday September 19, the writer in speaking of the testicles, observes "that these organs are absolutely without function at an advanced age is most certainly untrue for many individuals There is probably a germ of truth in the theory of Brown Séquard as to the invigorating influence of the testicular secretion, certainly the experimenters in organo therapy have not lost faith in it altogether The organs do not atrophy completely even after their special sexual function has apparently long been lost, and it is only reasonable to assume that they still have some utility in the organism " This is perfectly true I think we may safely infer that no organ of the body performs but one function and that alone The several tissues, using lymph as a medium live upon the blood, taking up from the blood the materials for, and returning to the blood the products of, their metabolism Therefore, the supply of blood that is not only deficient in quantity but defective in quality is one of the causes of nutritive derangement And another cause is the failure of the organism to eliminate the waste products which accumulate in the blood But yet a third cause of defective nutrition is the alteration of the blood which consists in the interdependence of each and every tissue of the body upon one another, and hence no part can either be removed or remain inactive without producing an ill effect upon the rest of the body Foster expresses himself on this subject in the following words "Changes in one organ may affect the condition of other distant organs by changes induced in the composition or qualities of the blood " And again "The products of the metabolism of one organ are carried to other organs for further elaboration and possible utilization " Take, for instance, the liver We know from Minkowski's experiments on birds, and from the experiments of Hahn, Masson, Pawlow, Nencki and others, on dogs that the extirpation of the liver in the former is attended with the replacement of uric acid by ammonia and lactic acid, and the ligation of the hepatic artery in the latter replaced uric acid by the carbonate of ammonia These experiments go to show that the liver protects the organism from poisoning by the products of its own cellular activity And Bouchard has demonstrated that this function of the liver diminishes in an enormous degree the toxicity of the waste products

Take next the pancreas It has been conclusively proved by the experiments of Von Mering, Minkowski, Lancereaux, Gley and others that besides its digestive functions the pancreas subserves the important purpose of utilizing the glucose that is normally present in the blood Extirpate the organ or tie all its veins and we have glycosuria or pancreatic diabetes as an immediate result Forty years ago Schiff demonstrated the troubles and alterations of nutrition following the extirpation of the thyroid He then believed that this body elaborated something which had an important effect on the nutrition of the nervous system This has since been verified classically in myxedema

From Gley's experiments on the rabbit we come to find now that acromegaly, that peculiar hypertrophy, is associated with disease of the pituitary body From the studies of Addison and the experiments of Brown Séquard, Langlois, and recently of Schaefer and Oliver, we have arrived at the conclusion that the medullary portion of the suprarenal capsules secretes something which increases the tone of all muscular tissue, especially of the heart and arteries Indeed, even the kidneys perform other functions besides that of eliminating waste products Bradford's experiments conclusively demonstrate the fact that the renal organs possess and perform another function, viz , the metabolism of the tissues

It is more than probable, therefore, that the testicles also have functions besides those intended for procreative purposes Testicular preparations may, therefore, reasonably be assumed to possess useful properties That they actually do influence the general nutrition will be readily admitted by the results obtained in the following case

L M , age 62, an Englishman by birth, has for thirty eight years been a sufferer from psoriasis When examined in June, 1896, was found to be pretty nearly hide bound by a thick layer of silvery scales from his head, forehead and neck, down his front and back, his arms, nates and legs to the palms of his hands and soles of his feet His nails looked "worm eaten," and the bends of his elbows and knees were cracked and bleeding In his travels in Europe he had consulted every dermatologist of any name and had tried every known remedy recommended by Startin, Tilbury Fox, Hebra, Unna, Kaposi and others He had tried hydropathic treatment for two years every description of sulphur treatment from simple sulphur to all kinds of sulphur preparations, including ichthyol and resorcin, with sulphur and mud baths for another two years, had been pitched and tarred within and without for another two years, the thrysophanic acid, chrysarobin, anarobin, mercury, iodin, pilocarpin and arsenic treatments for yet another two years, hot vapor baths, pure and medicated with salicylates, colchicum, potash soda and lithia, with all manner of diaphoretics, diuretics and purgatives for an indefinite period But it was of no use, the disease persisted and latterly he had ceased all treatment and was resigned to the inevitable

He was given a bottle of phospho albumin, a very palatable testicular preparation, made in Chicago, and he was advised to discontinue all external applications, and to avoid the use of water He *took a tablespoonful three times a day after each* meal, and he felt encouraged to continue the treatment until he had taken three bottles of it, when he was again examined

Now it was approximately estimated that this skin trouble covered about 2½ square feet of the surface of his body and I have to report the remarkable fact that after taking his third bottle of phospho albumin there was not a speck of the psoriasis to be seen Over the diseased patches were now visible dark chocolate brown stains, but of perfectly velvety smoothness without the least irritation or pruritus This is not the first or only case of psoriasis cured by testicular preparations Bouffe reports good results from Brown Séquard's fluid in this obstinate disease (*Press Med Belge*, 1894, No 35) I have another case of seventeen years' standing now under this treatment, but not enough time has yet elapsed to allow of any opinion being expressed as to its effects It is just possible this treatment may not succeed in the next case, for we do not know what the something is that produced the results and, hence, we are as yet ignorant as to the exact indications for its use In the next place we are ignorant of the causes which produce psoriasis When found in conjunction with syphilis specific treatment is beneficial, when it flourishes on a rheumatic or gouty soil the salicylates, colchicum and alkalies help to alleviate the urgency of the symptoms, but when it is "idiopathic" (a term which expresses our ignorance of etiology) and seems to be nothing more or less than a surface manifestation of some general nutritive derangement, then phospho albumin gives results that are simply marvelous The glandular bodies should be studied in the laboratory as to their physiologic chemistry and histology, and these studies combined with experimental physiology and empirical therapeutics might lead to great revelations M H LACKERSTEEN, M D

The Proposed Leprosy Congress

NEW YORK, Oct 19, 1896

To the Editor —I enclose some copies of letters relating to the proposed leprosy congress The first idea was to hold it in Bergen, Norway, out of compliment to Hansen The latter has now renounced his personal claims, and the opinions are now divided between London and Moscow As you will see, we were happy enough to secure the interest of Queen Victoria, and we have a well grounded hope that the British government will take an active part in the enterprise Dr Hutchinson thinks that the Prince of Wales will almost to a certainty consent to act as president of the Congress if held in London As the British empire is more interested than any other country in the question of leprosy, it seems but natural, especially with these great advantages, that London should be chosen Dr Morrow who is the committee appointed by the American Dermatological Association to represent it in the matter of the Congress, and who was given full powers to act, votes for Bergen first, London second, as the seat of the Congress and thinks that the most successful meeting could be obtained for London if our Congress meets shortly before or after the Moscow General Congress I myself shall vote for London Will you kindly favor us with an editorial voicing these sentiments, and greatly oblige, Very truly yours,

ALBERT S ASHMEAD, M D

LONDON, Sept 22, 1896

Dr ALBERT ASHMEAD —*Dear Sir* At the Ambassador's request I have much pleasure in enclosing herewith the answer from Sir Arthur Bigge to your letter addressed to the Queen I am, dear sir, your obedient servant,

JOHN RIDGELY CARTER, Secretary to U S Ambassador

BALMORAL CASTLE, Sept 21 1896

Dr ALBERT ASHMEAD —*Dear Sir* In reply to your letter addressed to the Queen and forwarded through the embassy of the United States in London, I have the honor to inform you that your communication has been duly laid before Her Majesty, who is interested in hearing of the proposed International Congress for the suppression and prevention of leprosy Your letter has now been forwarded to the Queen's ministers, in order that the question may be considered and dealt with by those who in all such matters must be Her Majesty's responsible advisers I have the honor to be, dear sir, yours very faithfully,

ARTHUR BIGGE, Private Secretary to the Queen

LONDON, Sept 16, 1896

Dr ALBERT S ASHMEAD —*My Dear Sir* I warmly approve your scheme and vote with both hands for Bergen It would be a mistake to make it a part of the Moscow congress If in Bergen and well ahead of the Moscow meeting, so that those who wished could attend both, it would, I think, be well attended For myself I might hope to get to Bergen, but scarcely to Moscow

I do not think that I much approve the idea of collecting money for leper houses What we have as medical and scientific men to do is to find out the cause and the means of prevention, and we should need all the money we can obtain for researches In the administration of the "Prince of Wales fund" we felt it to be a mistake to have undertaken aid to asylums It wasted our funds and did an infinitesimal amount of good

If you thought well to compromise and meet in London, I do not doubt that the Prince of Wales would consent to be president If you appoint patrons he would probably give his name to the Bergen list

Why not include "Yaws," or why not make it "For the Study of widely spread Endemic Diseases, Especially Leprosy and Yaws" It might still take its colloquial name from leprosy Wishing you success, I am, yours sincerely,

JONATHAN HUTCHINSON

TOKYO, JAPAN, Sept 2, 1896

Dr ASHMEAD —*My Dear Doctor* I am directed to acknowledge with thanks the receipt of your favor dated New York, Aug 5, 1896, and beg leave to reply that Prof *Kitasato* is highly delighted to hear of your project, and that he will be glad to do all in his power to further the interests of the Congress He is making researches on the subject you mention, and if they are completed at the time the Congress meets it will afford him much pleasure to report them He sends his best regards Yours very truly,

A NAKAGAWA, M D

Assistant in Institut fur Infections Krankheiten

BOGOTA, COLUMBIA, Sept 12, 1896

Dr ALBERT S ASHMEAD —*Dear Sir* I have had the honor to receive your favor of August 5 of this year, in which you do me the honor to inform me that in the coming year there will be held in Bergen a Congress of Leprologists, to which you do me the honorable distinction to invite me, and at the same time my own interest prompts me to interest myself with the government of my own country to make it accept the invitation which you address to that government, to take its place in the said congress, and to send to it an official delegate As for me, I accept with the greatest of pleasure my dear sir, such a signal show of appreciation, and I shall take my place in the Congress unless some u [illegible] accident prevents me Should such an accident [illegible] may be s[illegible]re of the sero the [illegible] you des[illegible] [illegible]ads in m h[illegible] receiv[illegible] o historic information, and a lot of things which seem to me to interest the eminent leprologists who will meet at the Congress

Since I have received your letter I have addressed myself to the Minister of Foreign Relations, in order to satisfy the recommendation made by you, and he told me that he had not yet received the communication which you declare having sent him through the American Minister But he thinks that he may assure you that the government will accept the invitation and that it will send an official commissioner, as you have asked him

And now will you allow me to ask you one question? I should like to know that Dr Hansen will experiment on some case of leprosy of the Hospital Luugaarde with serum therapy treatment which a year ago I have tried here, with good result, in order that when the Congress of Bergen shall meet the distinguished scholar will be able to pronounce his idea according to that treatment For that effect, I remit to you some copies of my third communication to the Academy of Bogota in which there are to be found all the details necessary to the propagation of the anti leprous serum, and for the treatment of the patients by that method Hoping for the kindness of yourself that you will forward this paper to Dr Hansen If he wants to make the experiments, without taking to himself the trouble of making the serum, you will do me the favor to let me know, that I could send from here the serum which will be necessary for him

With the feeling of the most distinguished considerations, I have the honor to declare myself your most attentive and sure servitor, JUAN DE DIOS CARRASQUILLA, L

COPENHAGEN, Sept 18, 1896

Dr ALBERT ASHMEAD —*Dear Sir* I have had great pleasure in receiving to day your letter, because I am working on the same subject since last year At the last congress in London in August, 1896 I spoke with the most renowned European leprologists of this matter, and they were all together of the unanimous opinion that a league against leprosy ought to be formed like the leagues already existing against tuberculosis and cancer I am going to Berlin one of the first days of October to find several other leprologists of our union I shall inform you of our deliberations on my return

Yours very truly, DR EHLERS

Treatment of Diphtheria

CAMDEN, N J , Oct 19, 1896

To the Editor —In the formula of my antiseptic solution in the JOURNAL, Oct 17, 1896, just to hand, an important misprint has occurred It should be in the formula *five* drops of carbolic acid instead of one drop

Will you kindly and promptly correct the same in your next issue Also I send you two letters which are of great interest in connection with my method of treating diphtheria Please give them space Yours very sincerely,

D BENJAMIN, M D

CAMDEN N J , July 16, 1896

Dr D BENJAMIN, *My Dear Doctor* —In reference to your Antiseptic Treatment for Diphtheria, will say that I have used your treatment for the past three years in at least seventy five cases of true diphtheria, without a death

The membrane disappeared so quickly in certain cases that reporting the case to the board of health seemed unnecessary

In a case of a little girl on South Fourth Street, Camden, who was taken with malignant diphtheria, her brother having died only a few days previous, in the hands of another physician, it was my privilege of witnessing the efficacy of this antiseptic treatment

The membrane disappeared in less than thirty six hours, the little patient convalescing on the fourth day As long as the above treatment gives me this percentage of cures, I have no need for antitoxin I remain, fraternally,

WM J KELCHNER, M D

CAMDEN, N J , July 9, 1896

To the Editor —Learning that Dr Benjamin is going to publish an interesting case of diphtheria, and seeing the case with him I desire to make the following statement

During the practice of twenty one years I have naturally met with a large number of cases of diphtheria , but the most malignant case that I ever saw to fully recover was Mrs Samuel Mills, of 726 Clinton Street, this city, who had two children die in close succession from diphtheria, who had been attended by a homeopathic physician Some time in April last, while attending the funeral of her last child that died, she was suddenly taken with a severe chill, and complained of a painful sensation in the throat, with intense pain in head and back She was quickly driven home and Dr Benjamin sent for Her condition became rapidly worse and her symptoms so alarming that her husband called at my office and requested me to take charge of the case until Dr Benjamin arrived

Under the circumstances I consented to do so I just had time to examine the patient, however, when the doctor drove up He confirmed my diagnosis that it was not only a typical case of diphtheria, but a most malignant form of the disease Upon examination he found her temperature to be 105, pulse 130, and respiration 26

I saw at once that it was a case calling for the antitoxin treatment Had she been my patient and had I been alone, I probably would have resorted to that remedy , and then Dr Benjamin declared in the face of such an unfavorable prognosis, that he not only would cure the case, but would in a very few hours check the progress of the disease by employing two well tried remedies of his, both locally and internally , I must acknowledge that when he made that statement I became somewhat incredulous But nevertheless the doctor evidently knew whereof he spoke, as in a remarkably short time, under the antiseptic treatment employed directly to the throat (which he claims destroys the germs and microbes at once), the patient showed marked symptoms of improvement The temperature soon became normal, the diphtheritic patches soon cleared off, and in less than a week the patient was down stairs

Respectfully,

217 South Sixth Street E E DEGROFFT, M D

Drinking Waters for Travelers

NEW YORK, Oct 16, 1896

To the Editor —We regret to encroach upon your time and we hope you will pardon us for doing so as a result of our desire to have you favor us by correcting in the JOURNAL an error which inadvertently crept into the issue of September 19 page 664, where, speaking of the several drinking waters for travelers, it is made to appear that Apollinaris Water and the various Hunyadi Waters are aerated drinking waters of the same standing

While it is true that Apollinaris is a dietetic and table water which the profession have time and again recommended to travelers in districts where the drinking water is the subject of suspicion, on the other hand the numerous Hungarian Bitter Waters coming from Buda Pest, which are called Hunyadi this or that, are strictly medicinal, being aperients, and, if reports go for anything, vary much from time to time in their specific gravity, in consequence of which Professor Liebreich (University of Berlin) in an article published in the *Therapeutische Monatshefte*, said

"It is, therefore, a matter for high satisfaction that the aperient water 'Apenta,' from the Uj Hunyadi Springs in Ofen, has been placed under state control The Royal Hungarian Chemical State Institute (Ministry of Agriculture) has undertaken this charge and, therefore, it is now possible to obtain a water which is free from injurious extraneous waters infected with organic substances The analysis has been published by Professor Liebermann, Director of the said Institute The proportion of sulphate of soda to sulphate of magnesia is 15 432 to 24 4968 in the liter, so that this water is to be classed with the best aperient waters, and may be pronounced one of the strongest Owing to the constancy of the Apenta Water ensured by the state guarantee, that confidence in aperient waters, which had been lost, will be revived in favor of this important therapeutic agent"

As an error in the columns of a journal of such high standing and authority as yours is apt to confuse many readers to their disadvantage and ours, we trust that you will be good enough to give the matter attention Yours very truly,

CHARLES GRAEF & Co

He Likes our Journal, but Money is Scarce

MILLBORO SPRINGS, VA , Sept 6, 1896

To the Editor —I received your letter and the JOURNAL September 25, please accept my thanks for them both After awhile (D V), I will become a member of the AMERICAN MEDICAL ASSOCIATION when money gets less ridiculously scarce

There is no money in rural sections now Corn 15c per bushel, butter 12c per pound, sweet potatoes $1 00 in July last, when a few years back they were $7 00 per barrel Nothing that a farmer has will sell

Send me the JOURNAL semi occasionally I enjoy the editorials, the terse and brilliant dash of the versatile pen tends to reason like the "needle to the pole," making their conclusions "solid buildings," no "castles in the air"

I am like you, doctor, about that terminology of "fair culture" We were all taught in about the first lesson in our Latin grammar that "os" and "on" were Greek terminations As to "stomatomycosis" and "coprostasis," "fair culture" slipped like "Cæsar in Africa," unlike him, however, I am sure he will not hold his "tripper," or wish to, when he looks for the words *κόπρος* and *στάσις*, nor will he find lead poisoning, whatever other morbific (escaping) elementaries there may be afloat This is strictly between you and me I am no critic, neither wish to be In your position you are compelled to notice such blunders

I will join the ASSOCIATION, nothing happening to prevent it, some time I am sincerely, etc ,

W S S

Twelfth International Congress of Medicine

MOSCOW, RUSSIA, Oct 10, 1896

To the Editor —Will you kindly insert in an early issue of your esteemed journal the following notice

From the Surgical Section of the Twelfth International Medical Congress in Moscow —Acting upon the advice of Dr E Browitz (Konigsberg), the Surgical Section of the Twelfth International Medical Congress has decided, in view of the approaching Congress, to collect international statistics on narcotizations for the current year (1896) For this purpose the managers of the said Section apply to all their colleagues and earnestly request them to give answers to the following questions

1 Number of narcoses from Jan 1, 1896, to Jan 1, 1897?

2 What narcotics were administered?

3 Number of fatal cases?

The Secretary of the Surgical Section, F Rein, Malaja Dmitrowka, house Scheschkov, Moscow, Russia, will be glad to receive such information, and, if possible, not later than July 1, 1897

F REIN, M D , Secretary of the Surgical Section

Serum-therapy

CHICAGO, Oct 25, 1896

To the Editor —Lahmann's assertion (see "Serum therapy," JOURNAL, No 17, page 914), upon healing diphtheria by freeing the body of autotoxins reminds us of the old therapy of evacuating the toxins by moving the bowels and sweating an old plan, with right relinquished or left to the quacks The renewal of the idea with some physiologic rays makes it no more valuable, we should be on our guard, having enough of the sort in the country

KL

Journal Volumes for Sale

CANADIAN, TEXAS, Oct 15, 1896

To the Editor —Can you refer me to any one who can use eleven volumes of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vols I to XI complete, bound and in good condition? Yours truly, CLAUDE WOLCOTT

PUBLIC HEALTH

Policemen Trained in Care of the Sick and Wounded —A letter to the *British Medical Journal* states that a trained "Samaritan" is always present at each police station in Berlin, and 1,500 men have been trained in ambulance work There are also "Samaritans" in each fire brigade The latter have cared for 1,533 cases since 1893

Providence Sewerage System —Residents along the west shore of Narragansett Bay, in the vicinity of Field's Point, are greatly disturbed over the sewage from this city The outlet of the mains is at Field's Point, and the tide carries the sewage along the flats to the west of Stave Goat Island and causes a constant nuisance The residents of Washington Park are also among the complainants, and attorneys are being consulted to ascertain their legal rights in the matter The sewerage system has just been completed and cost $2,000,000 It was thought by the Providence officials to be perfect, but it was predicted some time ago that an outlet inside of Warwick Neck would be useless It will cost several more millions to continue the system to a safe point down the bay

The Decadent American Birth Rate —France, to day, with all her industry, natural resources and ardent national life, finds herself face to face with this specter, and her statesmen are planning, by the modification of the inheritance tax law, to inspire a desire on the part of parents for more children In brief, by exemptions to families containing more than three children and by additional taxes on those with less, they hope to counteract the alarmingly crescent tendency of French married couples to rest content with very few "olive branches" In 1894 the birth rate in France was 22 to every 1,000 inhabitants, a decrease of 2 7 in a decade This is believed to be the lowest birth rate in the world, and no wonder thoughtful Frenchmen are aghast, and to this must be added the facts that illegitimate births and divorces are on the increase Our condition is by no means so bad, but it is bad enough to demand prompt attention and remedial efforts, if Dr Billings' latest figures be trustworthy In 1880 he says, our birth rate was 30 95 to every 1,000 people and in 1890 had dropped to 26 68 If it has pursued to now the descending ratio, it must be as we write, about 24 50, not 3 per 1,000 higher than the rate which frightens France It appears further from the eminent sociologist's researches that the class of parents best equipped to bring forth and educate children are the least inclined to this patriotic responsibility Into the causes of this we need not now enter and must content ourselves with simply entering a caveat —*The New York Press*

Regular Meeting Michigan State Board of Health, Lansing, Oct 9, 1896 —The meeting was called to order by the president, Hon Frank Wells of Lansing The members present were Prof Delos Fall of Albion, Mason W Gray, M D , of Pontiac, Judge Aaron V McAlvay of Manistee and Secretary Henry B Baker

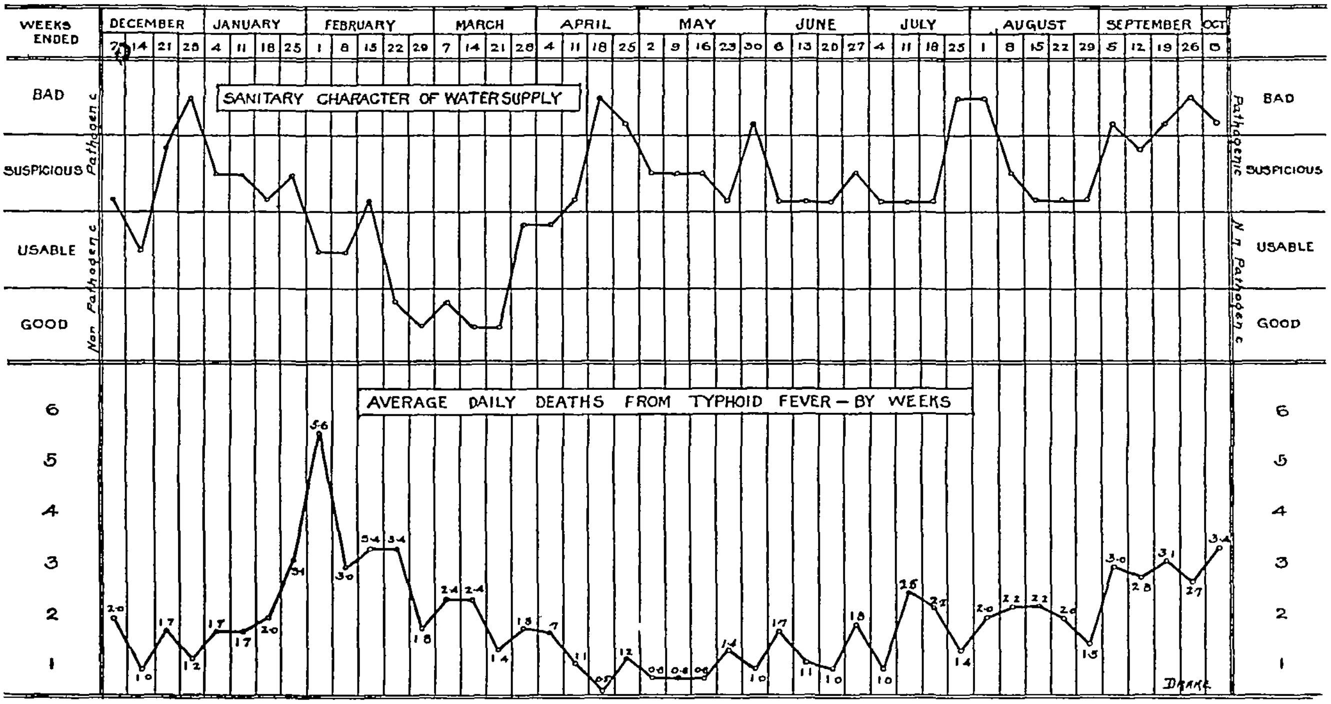
The regular business of auditing of bills and accounts was transacted The secretary presented his report of the conditions of health in Michigan and of work in the office during the quarter ending Sept 30, 1896 His report showed that the work of the office was fast being brought up nearer to date, and that work in connection with preparing the annual report of the secretary was progressing rapidly He thought that by Dec 31, 1896, his report for the year 1896 would be nearly completed The subject of the quarter centennial of the State Board of Health was suggested, and the board appointed the secretary a committee to report at the next regular meeting a plan for an appropriate celebration of the twenty-fifth anniversary of the establishment of the board, which should occur July 30, 1898

Doctor Baker said that during the past quarter he has occupied his spare time in ascertaining the results of the health work which has been done in Michigan, more especially for the restriction of dangerous communicable diseases The statistics collected by the Secretary of State and those collected by the State Board of Health agree in indicating that lives have been saved and sickness prevented which has resulted in saving to the people of Michigan over $1,000,000 per year The outlay has been very small The public health work of the State has, therefore, been exceedingly profitable In recent years the work has been greatly hampered for lack of money to properly distribute about the State the information necessary for the people to have in order to make the restriction of diseases as effective as it would be if all the people could be taught to cooperate in the work, nevertheless the results are very gratifying

Clinic Instruction in Infectious Diseases at London —According to the London *Lancet* for September 5, the facilities for clinic study at the public infectious disease hospitals has been materially improved during the past few years It says that while the importance of such study in the regular curriculum of undergraduates has long been recognized, but it is only within recent years that proper facilities have been afforded for taking advantage of the valuable material to be found in the fever hospitals of the Metropolitan Asylum Board "In former years the student had but few opportunities of becoming familiar with this branch of medicine, and it was by no means an unheard of event for a student to complete his career without having seen half a dozen cases of infectious disease That there is still evidence of the state of affairs which formerly obtained may be gathered from the fact that during 1895 no fewer than 1,277 patients, or a percentage on the total admission into the Metropolitan Fever Hospitals of 7 6, were after admission found not to be suffering from the diseases mentioned in the medical certificates upon which they were removed to hospitals, the percentage of mistakes at the Eastern Hospital at Homerton being 11 of the total admissions At the present time five of the admirable hospitals of the Asylums Board, viz, the Eastern at Homerton, the Western at Fulham, the Southeastern at Deptford, the Southwestern at Stockwell and the Northwestern at Hampstead, are open under certain conditions to students and medical practitioners, while instruction in smallpox is also afforded at the smallpox ships in the Long Reach near Dartford A student desirous of taking a course at one of the board's hospitals, must have completed his third year and have held the office of clinic clerk and dresser, he must then obtain the sanction of the medical school to which he belongs and pay a fee of three guineas for the first three months, and one guinea for each subsequent month to the clerk of the board, from whom he receives a card indicating the hospital to which he has to be attached At this hospital he must attend at stated times for at least two days in the week for a minimum period of two months, and on the completion of his attendance he receives a certificate from the medical superintendent whose lectures and classes he has attended While in the hospital the student places himself under the control of the medical superintendent and is bound to obey the regulations in force for the prevention of spread of infection These rules comprise the wearing while within the hospital wards of brown holland overalls, consisting of coat, trousers and cap, which are provided by the board, and the use of what may be termed a discharge block, which consists of an infected room where the overalls are left, a lavatory and a theoretically uninfected room The students are further required to keep their hair short and to be efficiently protected against smallpox A duly qualified medical practitioner has equally to conform to these regulations and obtain the consent of the medical superintendent of the hospital at which he elects to attend The student who attends these courses will obtain a fair knowledge of infectious disease, which will stand him in good stead in years to come, while he will also get an insight into the management of fever hospitals and the methods of disinfection practiced therein The provisions in regard to instruction in smallpox differ somewhat from the above, as it is necessary for the student to reside for from two to four weeks on the smallpox ships, where he is provided with rations, apartments and washing at the extremely moderate sum of 12 shillings per week The student has to travel to and from the hospital ships on the ambulance steamer and to furnish himself with a suit to which he does not attach much value, in order that it may be disinfected or destroyed at the termination of the period If the student can take this course during the summer we can promise him, as the result of a personal experience, a most enjoyable and instructive little holiday "

Typhoid Fever in Chicago —The diagram on the opposite page furnishes a most striking illustration of the relation of typhoid fever incidence to the character of a water supply—an illustration which, as the London *Lancet* has said of the first section of this diagram, reflects with mathematical accuracy the increase and decrease of the degree of pollution in the rise and fall of the death line Referring to this diagram in his "notes and comments" on the September report, the Assistant Health Commissioner, Dr Frank W Reilly, says that up to the close of September the daily analyses of the public water supply made by the city bacteriologist, Dr Gehrmann, and the city chemist, Mr Kennicott, show the water to have been "bad" 22 5 per cent, "supicious" 55 per cent, "usable" 10 per cent and "good" 12 5 per cent of the time since the first of the year During this period the death rate from the acute intestinal diseases and from typhoid fever—diseases directly related to impure water—has been higher than that of any other large city in the country and nearly double that of New York City The deaths from typhoid fever began to show a marked increase in August, 1895 During the twelve preceding months there had been a total of 455 typhoid deaths, or an average of 38 per month In August, 1895, there were 59 deaths, in September, 76, in October, 90, and during the twelve months ended Sept 30, 1896, there have been 751, an increase over the preceding twelve months of 65 per cent Comparing the first nine months of 1895 with the nine months of this year, the figures are January 1 to Sept 30, 1895, total typhoid deaths, 326, January 1 to Sept 30, 1896, total typhoid deaths, 559, increase in 1896 over 1895, *71 per cent* This is very nearly the death rate per 10,000 of population of the year 1889, immediately preceding the great typhoid epidemic of 1890 92 That year, 1889, the typhoid death rate per 10,000 of population was 4 83 The foregoing figures give a typhoid death rate of 4 63 for the past twelve months As compared with deaths from all causes the comparison is even more threatening The past twelve months have been much more healthful than 1889 in every respect except typhoid fever The total deaths (for the twelve months) amount to 23,676 or 14 62 per thousand of population In 1889 the death rate from all causes was 17 56 per thousand The present proportion of deaths from typhoid is 3 17 per cent of the total from all causes In 1889 it was only 2 67 per cent As set forth in the August report the unwholesome quality of the water has almost entirely offset the improved quality of the milk supply during the period, as shown by the deaths among infants and young children While there has been a marked reduction in the deaths of infants

DIAGRAM SHOWING RELATION BETWEEN
SANITARY CHARACTER OF WATER SUPPLY AND DEATHS FROM TYPHOID FEVER IN CHICAGO
DECEMBER 1895 TO OCTOBER 1896



under 1 year of age, who drink little or no raw hydrant water, the reduction of deaths among children over 1 year of age who do drink hydrant water has been less than 1 per cent

For a better understanding of the diagram it should be stated that the quality of the water is determined weekly from the combined chemic and bacteriologic findings for each day during the week Four qualities are designated "Good," "usable," "suspicious" and "bad ," and three degrees of each When the supply is designated as "good" or ' usable" the samples have shown an entire absence of any quality capable of producing disease When designated as "suspicious" or 'bad" the samples have shown qualities, at one or more times during the week, capable of producing disease The quality of "good" is determined by an entire absence of nitrates and nitrites, by traces only of free ammonia, by 001 100,000 or less of albuminoid ammonia, by entire absence of pathogenic bacteria, and by a count of bacteria of less than 500 per c c The quality of "usable" is determined by an entire absence of nitrates and nitrites, by free ammonia not in excess of 004 100,000 at any time, by albuminoid ammonia not in excess of 02 100,000 at any time, by an entire absence of pathogenic bacteria, and by a count of bacteria not more than 1000 to the c c The quality of "suspicious" is determined by any presence of nitrates or nitrites, by any excess of free and albuminoid ammonias beyond 004 and 02 respectively, and by any excess beyond 1000 bacteria to the c c whether it occurs on one or more days The quality of "bad" is determined by the presence of free or albuminoid ammonia beyond the above figures and of nitrates or nitrites, the presence of pathogenic bacteria and by a count of bacteria of more than 1000 to the c c The first, second and third degrees of the designated quality is determined by the more or less continual presence or absence of the factors of that quality and by the closeness to which the next quality is approached The presence of any one of the factors of quality, even when the others are absent, designates the quality and if they are all present, if only at one time, the highest grade of the quality is indicated In addition to this the average findings and their relation to one another—with respect to the proportion furnished by each tunnel to the total supply—are taken into consideration in the statement of the sanitary quality of the total supply The characterization is a matter of expert judgment and the figures in themselves do not always indicate the quality

The highest point, 5 4 of the typhoid death line, during the week ended February 1, is thus accounted for by Dr Reilly "For several weeks before that ended Dec 14, 1895, the water supply had averaged "usable" or "good," as indicated on the diagram, and the deaths from typhoid fever and from the acute intestinal diseases were below the average During the first 17 days of December the precipitation was considerably less than one half the average precipitation for this month during the previous 25 years—only 60 of an inch instead of 1 35 inches The sanitary character of the water supply improved from the first degree of "suspicious" during the week ended December 7, to the second degree of "usable" during the week ended December 14 On the 18th 1 10 inches of rain fell, on the 19th 2 66 inches, and on the 20th 1 67 inches, making a total of 5 43 inches in 72 hours or 3 09 inches more than the average total for the whole month This excessive rainfall flushed the sewage contents of the river and its branches into the lake and contamination was first noted on the 20th, increasing to the middle degree of "bad"—pathogenic—during the week ended December 28 The daily average of deaths from acute intestinal diseases during this week was 2 1 During the following week (ended January 4) this rate shot up to 8 4 per day—exactly quadrupled The typhoid mortality was affected more slowly—the incubation period being longer—but during the week ended January 18, this began to rise from a previous average of 1 65 deaths per day until it reached 5 4 per day during the week ended February 1 "

With the improved quality of the water, beginning during this week, the deaths began to diminish, so that between the weeks of February 22 and April 4, when the water was continuously "good" or "usable," the deaths declined from a daily average of 3 4 (Feb 15 22) to 0 5 per day in the week of April 18, and an average of less than 1 per day, for the eight weeks from April 11 to May 30 The pollution line culminated again in the week of April 18, since which time it has varied from first degree of "suspicious" to middle degree of "bad," and the death line has reflected this pollution at the usual interval —*at the end of the diagram averaging 3 4 per day*

Diphtheria and Typhoid Fever in Ohio —The following are the cities and towns in Ohio reporting an unusual prevalence of diphtheria and typhoid fever, since Aug 1, 1896 Diphtheria Minster, 39 cases, 6 deaths, Gervais 27 cases, deaths not known, Brilliant, number of cases not known, Byer, 33 cases, 19 deaths, Conesville, 12 cases, number of deaths not known, Five Point, 7 cases, 2 deaths, New Matamoras, number of cases not known, Bucyrus, 18 cases, 2 deaths, Franklin, 10 cases, 6 deaths, Ironton, 33 cases, 4 deaths, Portsmouth, 56 cases, 7 deaths, Cincinnati, 131 cases, 35 deaths, Cleveland, 170 cases, 47 deaths, Columbus, 17 cases, 2 deaths, Grover Hill, 15 cases, 1 death, Marysville, 29 cases, 2 deaths, Niles, 23 cases, Springfield, 59 cases, 14 deaths, East Liverpool, 28 cases, 6 deaths Troy, 11 cases, 1 death, Findlay, 14 cases, 5 deaths, total 23 places, 733 cases and 159 deaths Typhoid fever Gibsonburg, 105 cases, 9 deaths, Lancaster, 28 cases, Dyesville and neighborhood, 22 cases, 4 deaths, Conesville, 35 cases, number of deaths not known, Haydenville, 9 cases, Conneaut, 12 cases, 2 deaths, Cincinnati, 27 deaths, Cleveland, 40 deaths, Columbus, 11 deaths, Youngstown 104 cases, 11 deaths, Salem, 16 cases, 3 deaths, Mansfield, 34 cases, 3 deaths, Hayesville, 11 cases, 1 death, total 13 places, 374 cases and 111 deaths

Medical Practice Act of Illinois —Resolutions adopted by the Illinois State Board of Health, Oct 6, 1896

WHEREAS, the wise and progressive enforcement by our predecessors of the Act to Regulate the Practice of Medicine in the State of Illinois passed July 1, 1877, has resulted in a general, but not uniform improvement of the methods of medical education throughout the United States, and a material elevation of the standard of professional attainments and ability necessary to obtain the legal right to practice medicine in many States, thereby securing in such States a better equipped, more competent and more scientific body of medical men to the great gain and advantage of the people thereof, and

WHEREAS, this latter result has been attained to the fullest extent in those States where the college diploma is not recognized as final, but only as a qualification for examination by a board whose members are not connected with, or interested in any college or teaching institution, be it

Resolved, By the present members of the Illinois State Board of Health, with the fullest appreciation of the invaluable work of their predecessors, that Medical Education and the status of the Doctor in Medicine have outgrown the limitations of the Medical Practice Act of 1877, now, therefore be it

Resolved, That said Act should be so amended as to require, first, that all applicants for the right to practice medicine and surgery or any of their branches in the State of Illinois, shall demonstrate their fitness for such practice, through an examination by a board of impartial, competent and practical examiners, skilled in the various branches of medicine and surgery and no member of which board shall be connected or affiliated with or interested in any diploma granting college or teaching institution Second, that no applicant shall be eligible to such examination unless the legal possessor of a diploma of graduation from a medical college in good standing,

Resolved, That this Board earnestly invite the cooperation and assistance of kindred boards throughout the United States, to the end that uniformity of practice may ultimately obtain in the recognition of medical practitioners in all parts of the country, of all reputable medical colleges whose dignity and usefulness will thereby be promoted, of the medical profession of the State, as represented in the various medical societies, with the view of excluding the incompetent and unworthy from its ranks, and of the members of the forthcoming general assembly in this effort to protect the health and lives of citizens of the State —J W SCOTT, Secretary Illinois State Board of Health

SOCIETY NEWS

The National Sanitary Association —The second annual convention of this society was held in Brooklyn on October 14 and 15, Dr Frederic Jewett, president Important scientific business and the inspection of numerous public works important to sanitary officers in cities occupied the attention of the members to the full At the closing session, officers for the ensuing year were chosen as follows President, Dr F O Young, Lexington, Ky, vice presidents, Drs H C McLean, Brooklyn, N Y, F A Wilson, Meriden, Conn, and C S Benedict, New York, secretary, T E Veal, Esq, Atlanta, Ga, treasurer, J Hoadley, Esq, New Haven, Conn, executive committee, A R Moore, Esq, Brooklyn, N Y, Drs F A Jewett, Brooklyn, N Y, Wallace Sibley, Rochester, N Y, Archibald St George, Fall River, Mass, and J Hoadley, Esq The third annual meeting was named for October, 1897, at Lexington, Ky

The Sixty eighth Annual Congress of German Naturalists and Physicians —The Congress at Frankfurt opened with over 3,000 members inscribed, among them all the names most famous in science in Germany, Virchow, Leyden, Gebhardt, etc The Empress Frederic was also present as a member Some of the addresses are summarized elsewhere in the JOURNAL The proceedings were preceded by laying the corner stone of a monument to Sommering, a famous Frankfurt anatomist and physiologist, and, as the German papers state, the inventor of the electric telegraph

The Twelfth International Medical Congress —It is officially announced from Russia that no distinctions will be made against Jewish physicians coming to Russia to attend the Congress All that is necessary is to have their passports *visêd* at home by the Russian consul before they start, which is the regulation for all foreign members of the Congress Instructions to this effect have been forwarded to all the Russian consulates and embassies

The American Laryngological, Rhinological and Otological Society —The following circular has been issued

NEW ORLEANS, Oct 20, 1896

My Dear Doctor —The meeting of the Southern Section of the American Laryngological, Rhinological and Otological Society will be held in New Orleans, March 3 and 4, 1897 This date has been selected as it will permit visiting members to see New Orleans during the carnival season and will enable them to secure half rate railroad transportation We shall be pleased to have you attend the meeting and to receive from you the title of a paper, on a subject within the object of the Society, to be read before the meeting of the Southern Section The number of physicians who devote their attention to diseases of the ear, nose and throat has increased so much and the subjects for discussion have become so extensive that it is difficult in the time devoted to the annual meeting of the Society to give the necessary time to many important questions On this account, the four Sections of the Society have been formed, the object of which is to promote the interest of the specialty during the interval of the annual meetings A meeting of the Laryngological, Rhinological and Otological Society in the South is a distinctly new enterprise and should be encouraged With the active cooperation of the physicians interested in this work, the carnival meeting of the Southern Section of the American Laryngological, Rhinological and Otological Society will be an assured success

Candidates for membership should send their names, properly endorsed to Dr Robt C Myles, Secretary, 46 West 38th Street, New York, or to Dr W Scheppegrell, so that they may be acted upon by the Council of the Society Very truly yours,

W SCHEPPEGRELL Chairman Southern Section

MISCELLANY

Dr S C Stanton, formerly connected with the Chicago *Medical Recorder*, is now editor of the *Medical Standard* He is able and well qualified for the duty

Promotion —H W Sparks, formerly passenger agent for the Big Four Railroad, has been appointed traveling passenger agent, vice C W Norris, resigned Those who remember the kindess and courtesy extended by this gentleman to the passengers on THE JOURNAL special train to Atlanta, will be pleased to learn of his promotion

"Osteo malacia" Cured by Oophorectomy —The *Gaz degli Osp* of September 27, reports a case of severe and very painful osteo malacia cured by Piretti of Naples with a double normal ova iotomy, which it says should go on record as one of the really miraculous cures of modern surgery The improvement was apparent in a few hours, and it was soon complete and permanent, over a year having passed since then, with progressive restoration to perfect health

Death of Children from Hyperthermia —A recent discussion of this subject brought out several cases of apparently healthy children whose temperature rose suddenly from some inexplicable cause to 108 degrees F , most of them fatal Prompt cooling measures are the only means to save such cases Some ascribed the fatal result to heart failure Engel has observed a case of fatal hyperthermia following a warm "wrapping" in pseudo croup, which produced irregular action of the heart —*Deutsch Med Woch* , October 8

The South African Republic and the Geneva Convention —Information has reached this country on September 30 that His Excellency, Mr Bulaert Van Blockland, envoy extraordinary and minister plenipotentiary of the South African Republic at the Hague, forwarded to the Swiss Federal Council in the name of his government the act of adhesion of the South African Republic to the convention concluded at Geneva, Switzerland, Aug 22, 1864, for the amelioration of the condition of the wounded of armies in the field Prior to this the latest act of adhesion to the Red Cross Association was that of Siam in July, 1895

Rare Case of Gallstones —A recent number of the *Deutsch Med Woch* describes a bunch of sixteen gallstones evacuated in the feces without much effort and no previous disturbances except a violent brief attack of fever and pain in the abdominal region two years before The case was that of a woman of 46 years, who had worn a truss for umbilical hernia for sixteen years The bunch of unmistakable gallstones weighed 12 83 grams and measured three by four centimeters This recalls Morgagni's observation of a similar conglomerate which weighed 75 grams and consisted of sixty stones.

The Dumb Thermometer —The improvement in this thermometer consists in the absence of the scale, which is apt to depress patients who catch a glimpse of it, realizing the importance of the temperature recorded A small case fits over the instrument and a scale on this enables the physician to read the thermometer as he slips it inside after leaving the bed Mendelssohn thinks it may be found useful Dr R D Murray several years ago recommended the physician, in cases of yellow fever, to always use the centigrade thermometer, as the general public in America were unfamiliar with it, and therefore could view a high temperature without fear

The Indian Sacrifice —Under British rule the Suttee, the Juggernaut and other ancient sacrifices of human life have been done away with among the natives of India There is another huge sacrifice that remains to be attacked namely, the enormous waste of the lives of Indian women and children that is constantly going on from want of medical aid The customs of the country forbid the women from consulting men upon matters concerning the health either of themselves or their offspring The same reluctance, however, does not prevent them going to their priests, who administer most disgusting and abominable methods of treatment This should be a good field for medical women —*Med Press*, September 30

Special Hernias in Women —Waldeyer (*Centalbl f Gynäk* , No 30, 1896) demonstrated at a meeting of the Berlin Obstetrical Society some important anatomic researches as to the position of the ovary and other pelvic viscera He maintains that the ovary lies in a shallow pit, which is really a triangle of peritoneum elevated at its margins, *formed by the round* ligament, the umbilical artery and the ureter This pit is sometimes very shallow, but it may be very deep, so that the ovary lies in it practically in a state of prolapse, and the peritoneum may even form a hernial pouch, which has been found projecting into the lesser sciatic foramen or into the greater, either above or below the border of the pyriformis Waldeyer exhibited an incipient hernial pouch of this kind He likewise showed an inguinal hernia containing the Fallopian tube, and a pelvis with a defect in the symphysis pubis, into which a diverticulum of the bladder had forced itself

Mixed Clinical Classes —The announcement that Mr Jonathan Hutchinson has been compelled to exclude ladies from his popular clinical afternoons on account of the unwillingness of the male patients to undress before them is full of significance It is greatly to be regretted that this course should have been deemed necessary, for it places yet another obstacle in the way of the acquisition of clinical knowledge by women Doubtless, in the near future, the public will become as accustomed to women as clinical observers as to women cyclists, and will abandon foolish protests against the one as they have ceased to objurgate the other —*Med Press*, September 30

Bequests to Medical Charities —The contest over the will of the late Thomas T Wyman of Boston, by which $100,000, beside the residue of his estate, which is said to amount to $472,319, is left to various public charities, has been settled out of court The will was contested by certain relatives, and it is stated that the amount given to effect the compromise will only slightly diminish the residue of the estate The following medical charities receive $20,000 each The Emergency Hospital, the Cambridge Hospital, the New England Hospital for Women and Children, the Boston Lying in Hospital, the West End Nursery and Infant's Hospital, the Children's Hospital, the Massachusetts Charitable Eye and Ear Infirmary, the Sharon Sanitarium, the Boston Home for Incurables, the Consumptives' Home, the Carney Hospital and the Perkins Institution and Massachusetts School for the Blind The residuary legatees are the Massachusetts General Hospital, the Boston City Hospital and the Massachusetts Homeopathic Hospital

The Agglutinating Substance in Typhoid Serum —It is announced as the results of the study of the peculiar agglutinating properties possessed by typhoid serum (which is now a fully established fact) that the albuminoid substances, fibrinogen, globulin or casein, isolated from the fluids of a typhoid fever patient by certain processes (described in the *Bulletin de l'Académie de Médecine*, September 29) take away with them the agglutinating property and retain it at least to a certain degree They lose it in solution and recover it in their precipitate This fact is interesting not only to the physician but to the chemist, who may find in this agglutinating property some new reaction for the difficult study of albuminoid substances Others have discovered the same property in the serum in "proteus" infections

Normal Physiologic Standards in Mexico —It has been found that the atlases and charts published abroad and accepted as the standard of the normal individual do not apply to Mexico Vergara de Lope announces that in his investigations the characteristics of the urine, for instance, differ from those in other countries , it is more concentrated, less in quantity and lighter colored He ascribes the two former to the effect of the altitude on the intra vascular arterial tension, as the tension of the blood diminishes with increased rarefaction of the atmosphere He does not attempt to explain the lighter color, merely remarking that the hematic pigment, which some consider the cause of the coloration of the urine is present in this concentrated urine to excess and, therefore, the cause of the lack of coloration must be sought elsewhere —*Revista Quincenal*, September 1

When Licensing of Milkmen not Authorized —Where it is doubtful, after giving full force to all the provisions of a city's charter, whether the charter authorizes the licen- [illegible] lkmen the supreme court of errors of Connecticut holds, in the case of State v Smith, decided May 14, 1896, that it does not authorize it To illustrate The charter of the city of Bridgeport authorized the common council to make ordinances, not inconsistent with law, relative to commerce, to the inspection of produce brought into the city for sale and the election of inspectors for that purpose, to the sale or offering for sale of unwholesome produce of all kinds, to "licensing cartmen, truckmen, hackmen, butchers, bakers, petty grocers, or hucksters and common victualers, under such restrictions and limitations as said common council may deem necessary and proper" to the health of the city, and to "any and all other subjects that shall be deemed necessary or proper for the protection and preservation of the health, property and lives of the citizens" Here the court does not find authority for an ordinance excluding every one who has not received a license from the local health officer from participating in the business of a milkman within the city when the public statutes leave it open to all on equal terms

Convicted of Being an Unregistered Druggist —The defendant in the case of Queen v Simpson, according to a report in the Canada *Law Journal*, being owner of a large departmental store, was charged with keeping open shop for retailing, dispensing and compounding poisons contrary to the law of the Province of Ontario It appeared that part of his store was set apart for the drug department and was under the management and control of one Lusk, a duly qualified and certified chemist, registered under the pharmacy act, who dispensed the drugs, giving bills for the same on which defendant's name was printed, and on some of which his own name was also printed with the word "druggist" under it The defendant was never inside of the drug department nor interfered with the conduct of the business Lusk purchased all the drugs on his own judgment, but with the defendant's money, who received the proceeds, Lusk receiving a certain portion for his remuneration under agreement with the defendant Under these circumstances, the high court of justice of the Province of Ontario held June 16, 1896, that the matter must be remitted to the magistrate (who had dismissed the information) with instructions to convict the defendant

Formation of Urobilin —The conclusions of an article on this subject in the *Brit Med Journal*, October 3 are as follows 1 The bile pigment present in the upper part of the small intestine during its passage along the alimentary canal is converted into some colorless chromogen, to be again converted in the lower part of the small intestine into bile pigment 2 Urobilin is, as a rule, formed in the large intestine below the ileo cecal valve, and only rarely in the small intestine, that is to say, only in those parts where the intestinal putrefaction is most active 3 The staining of the wall of the cecum and large intestine with urobilin is due to postmortem diffusion, and is not any indication of the absorption of urobilin in the living animal Why it should in some cases be most marked in the cecum and just below the cecum, and not in the rectum, can only be explained by the fact that those parts are generally found in the postmortem room more decomposed than the rectum 4 The increase of urobilin in the urine, as well as having pathologic significance—as has been already recognized in cases of internal hemorrhages, such as cerebral, peritoneal or hemorrhagic infarctions and extrauterine pregnancy, and probably when red blood corpuscles are being destroyed, as in infectious fevers, scurvy and pernicious anemia—points also in favor of increased intestinal putrefaction, and may be a useful chemic test for such purpose

Photograph Evidence —In an action to recover damages from a city for injuries sustained through a fall alleged to have been occasioned by an inequality that had been negligently allowed to exist in a sidewalk, where the defense of contributory negligence was pleaded, it was contended by counsel for plaintiff that photographs of the place where the accident occurred should not have been admitted in evidence He argued that they did not tell the story told by the human eye, or in other words, that the picture they made to the apprehension was not the picture (of the obstruction in this case) made to the mind by the eye One of the illustrations used to show how little analogy there is between a photographic plate and the retina of the human eye, and that the imaging capacity and the character of the imaging performance of the former afford no just criteria of the imaging capacity and performance of the latter, was that the skin of the human face, which under the microscopic inspection of a physician is smooth and absolutely free from eruption, under the pitiless revelation of a photographic plate may be found to be dense with the pustules of smallpox But the United States circuit court of appeals does not feel that it can concur fully in this view of the question, holding, instead, that the trial court did not err in overruling the objection, and in considering the objection as going to the effect of the testimony, and not to its admissibility Scott v City of New Orleans, decided June 9, 1896 At the same time, it acknowledges there is much force in the suggestions of the counsel, and says that touching the effect of this testimony the jury should be fully and carefully instructed, and warned against its liability to mislead

"Douglasitis"—This is the name given by Condamin to the chronic inflammation of the recto uterine cul de sac, which differs from Schultze's posterior parametritis, as there is none of the tendency of the latter to cause retraction and afterward extension of the sacro uterine ligaments, and thus favor retroversion of the uterus Douglasitis is usually consecutive to salpingian lesions, but it also occurs as a primary affection, as Condamin has found in the course of four laparotomies Repose in the dorsal decubitus alleviates the pain of douglasitis much more readily than of salpingitis, and this is one means of diagnosis It is characterized by the multiplicity of the lesions, which can be palpated through the vagina by inserting the middle and index fingers, when not only the sacro uterine ligaments can be distinguished, but a number of small attachments, traversing in every direction the floor of the recto-vaginal pouch It is treated with massage, and systematic distension of the vaginal cul de sac by means of tampons (columnization), but if it does not yield to simple methods, and if there are diseased appendages, laparotomy is indicated, and after detaching all the adherences, etc , an anterior abdominal hysteropexy, to prevent the uterus from becoming displaced —*Lyon Méd* , September 27

Absorption of Medicines by the Vagina —In 1886, at the annual meeting of the Mississippi Valley Medical Association, Dr I N Love read a paper with the title "Artificial Alimentation and Medication," wherein he gave clinical evidence in favor of the vagina being made available (where the conditions would permit) as a medium for the administration of medicines and predigested food Ten years' additional experience has strengthened him in his views, and they are confirmed by a recent article in the *Collegione Italiano di Litture sulla Med* , No 2 It states that in one hour after the insertion of a tampon saturated with a 20 per cent solution of potassium iodid the urine contained iodin, the maximum of elimination being twenty four hours after application, and in forty eight hours no trace of iodin is found In the fever patients the absorption was very rapid, while in the hysterectomies it was not altered Iodoform is absorbed in small quantities, commencing seven hours after application and lasting twenty four hours To secure rapid absorption the vagina should be insufflated with fresh iodoform, which should be allowed to remain several days Salicylic acid is rapidly absorbed in large quantities, appearing in the urine in one hour and disappearing in twenty-four hours Salol is also rapidly absorbed, and remains for a long time traceable in the urine Antipyrin is also rapidly absorbed, appearing in the urine one and a half hours later, and remains for forty eight hours but the antipyretic power is less than when administered by the mouth The conclusions reached here are, in general, that the vagina undoubtedly has absorptive powers, and that these powers are increased in pregnancy and in the puerperal state and in the fevers —*Medical Mirror*, September

Improvements in Antitoxin —Behring stated at the recent Congress of Naturalists and Physicians, that the inconveniences which sometimes follow the use of antitoxin are due to the serum it contains, rather than to the antitoxins, as they are produced as frequently by injections of the serum alone Consequently he is striving to manufacture antitoxin in as concentrated form and with as little serum as possible It will soon, therefore, be more accurate to designate it antitoxic therapeutics, instead of serum Knoll's investigations have established the fact that the blood assimilates the entire amount of antitoxin injected, and that it is not taken up by the corpuscles, but by the fluid elements of the blood The antitoxins thus assimilated gradually vanish out of the blood again, until in eight days they are reduced to a tenth, and by the end of the third week they have almost entirely disappeared Behring asserts, therefore, that they positively confer immunity for at least three weeks, and not longer than eight or ten It is a curious fact that the length of the period of immunity is fixed, and does not vary with the quantity of antitoxin injected The conclusions of a recent critical and experimental study of the effects of antitoxin on the organism, by Poix in the *Presse Méd* of October 3, confirm Behring's statement that the accidents following the use of antitoxin are due to the serum and not to the antitoxins Poix warns against its use on tuberculous patients, as serious congestions, etc , are liable to follow in these cases Behring's resignation of his professorship at Marburg was not accepted, but he was given an extended leave of absence Beside the Hochst factory where the antitoxin is produced for sale, he has his private institution at Marburg, devoted to strictly scientific research, and the "standardizing" institute in charge of Professor Ehrlich, which is under government control —*Therap Woch* , October 4

Louisville

Annual Mortality Report —The report of Health Officer White for the past year contains much that is of interest He reports a total of 3,295 deaths, the death rate per 1,000 based on a population of 211,100 being only 15 5, death rate of whites, 14, and of colored 22 7 The report shows for the first time the prevalence of the contagious diseases as it is the first year that the reporting and placarding of these cases has been observed There were 137 cases of diphtheria with 72 deaths, a mortality of 52 5 per cent There were 238 cases of scarlet fever placarded, with four deaths There were 2,283 vaccinations reported, 724 diseased cattle were killed and 4,514 diseased cattle condemned and sent out of the city There were 225 stillbirths Consumption caused 370 deaths, typhoid fever 131 deaths, pneumonia 269, whooping cough 11 Of the total number of deaths 565 were under 1 year of age and 898 under 5 years of age Two thousand, four hundred and forty three were white, 852 colored 67 more male than female

Cincinnati

The Cincinnati Hospital has again broken into the editorial colums of the daily press and the present management is severely criticised for the manner in which the institution is being run During the past few days several women have escaped from the hospital and the last two give as an alleged reason for their action that they were almost starved The much promised reforms have so far failed to materialize The Board of Trustees have passed a resolution to ask the next legislature to appropriate $50,000 to make necessary improvements, the Board also refused the request of the Board of the Eclectic Medical Institute to allow their students to witness the operation (free of charge) on patients sent by the college

At the first meeting of the Academy of Medicine, Dr J C Oliver read a paper on the "Surgical Treatment of Epilepsy " He considered the operative treatment warranted in only a very small percentage of cases This week Dr R C Hill read a paper on "Intestinal Polypus as a Cause of Death "

The mortality report for the week shows Zymotic diseases 11, constitutional diseases 19 local diseases 36, developmental 10, violence 3 under 5 years 22 from all causes 79 annual rate per 1,000, 11 73, preceding week, 93 corresponding week 1895, 99, 1894, 87, 1893, 93

Dr Albert Snell has been arrested on a warrant sworn out by Dr Frank Winders, secretary of the State Board of Medical Examiners, charging him with violation of the medical practice laws This is the first arrest under the new law

The State Board of Health of Indiana have ordered all health officers of the State to provide themselves with a long glossy linen duster and skull cap to be carried in a separate bag and to be worn whenever they enter a building when any contagious disease exists

A case of hydrophobia recently developed in Columbus, Ohio The patient was bitten by a dog last July while attempting to give the animal, which had been bitten by another dog, some medicine For several hours before the man died it became necessary to strap him to his bed

Suit for false Committment —A woman residing in Columbus has recently entered suit against Dr W F Scatterday for $5,000, alleging damages to this amount as a result of her commitment in an insane asylum by the doctor, who was her physician She claims she was sane at the time

Washington

Health of the District—The report of the health officer for the week ended October 17 is as follows The death rate during the past week stood at 21 48, as compared with the average rate of 23 53 and with 26 80 in the same period last year The deaths reported to the health department numbered 116, of which 60 were white and 56 colored As compared with the late preceding weeks there was a slight decrease in the chronic brain, heart and kidney disorders, and in diarrheal complaints In those of the lungs and of children under 5 years old there was an increase Of diphtheria five deaths occurred, and none of scarlet fever The general health of the city, as indicated by the causes of mortality presented the same average above the normal as has prevailed throughout the fall months, the death rate running from 2 to three below the annual average per 1,000 inhabitants The new cases of diphtheria were 12, houses released from quarantine 8 and those left placarded 31 Of scarlet fever one new case reported, 2 houses released from isolation, leaving 5 placarded

District Medical Society—Toner Memorial Meeting —At the regular meeting of the Medical Society held on October 21 all regular business and papers were suspended and the meeting made a memorial one in honor of the late Dr Joseph Meredith Toner The meeting was called to order by Dr S C Busey, the president, who began the exercises by a most interesting life sketch of Dr Toner and closed his remarks by paying high tribute to his memory Drs W W Godding, Charles H A Kleinschmidt and J D Morgan read interesting addresses in his praise The papers read at the meeting will be published and distributed among the profession upon application

Adverse Report on a Dental College —A special committee consisting of Drs W P Carr, J Ryan Devereux, Clifton Mayfield, B F Odell and Henry Noble, appointed by the commissioners to examine the standing of the proposed Washington College of Dental Surgery, which has applied for a license to do business in the District, has submitted an adverse report All the committee except Dr Odell signed the report, which says "The college is just such an institution as the law proposes to keep out of existence It has no endowment or building, and its total plant is valued by the incorporators at $1,000 The faculty have not demonstrated any ability to teach, except in the National Homeopathic College, which was ruled out of existence by Judge Miller Two members of this proposed faculty were members of its faculty Members of the faculty of the proposed college admit that it is based upon the Washington Homeopathic Medical College dental department, whose plant they purchased and a majority of whose faculty they have absorbed, but proclaim their intention of raising the institution out of the metaphorical mud into which they admit it has fallen Their course and actions, however, when connected with the Washington Homeopathic Medical College dental department, and their present attempt to justify that course render it, in the opinion of your committee, extremely improbable that they will make any serious effort to do so, while their lack of endowment, lack of sufficient appliances and lack of eminent reputation preclude such a possibility, even in the face of earnest effort None of the members of the proposed faculty belongs to any reputable medical or dental society or association, regular or homeopathic, except one, who is now under investigation by the Dental Society of the District of Columbia for unprofessional conduct We would, in conclusion, call attention to the fact that Dr Odell, who was appointed on this committee, is also a member of the proposed faculty, and that while he was present at our most important meeting, he declined on the ground that he could not pass upon his own character, to sign any report of this committee "

Philadelphia

The Mutual Aid Association of the Philadelphia County Medical Society will hold its annual meeting on November 9, at the residence of the president, Dr John C Da Costa The eighteenth annual report will then be presented by the treasurer, Dr Geo B Dunmire The total amount of money now at interest is $12,889 63, an increase of $1,103 63 since the last report The members of the Association number 122, of whom 7 are life members The Association has two annuitants, one widow and one orphan daughter under its care

The Medical Schools opened their doors on the first of this month with an increase in the number of matriculants over last year Provost Harrison of the University of Pennsylvania formally opened the several departments He referred particularly to the new Dental Hall and the dormitories among the evidences of progress since last year Dr W M L Coplin, the newly elected professor of pathology and bacteriology at Jefferson College made the introductory address At the Medico Chirurgical, Dr Isaac Ott opened the session with a lecture on Claude Bernard and recent advances in physiology Dr Elizabeth R Bundy delivered the address before the students at the Woman's Medical College, particularly impressing upon them the importance of hygienic living and the evils of over study, and spoke on the baneful results of a resort to bromids or to narcotic drugs or the caffein bearing preparations She incidentally paid a well deserved tribute to the bicycle as a means of outdoor exercise for women and as an incentive to more rational dress

The College of Physicians held its first fall meeting on the 3d inst, the president, Dr J M Da Costa, in the chair Dr William J Taylor and Dr Chas W Burr read a paper entitled 'Report of a Case of Tumor of the Medulla Oblongata " It was remarked that the symptoms during life were insufficient to establish the diagnosis and the lesions found at the autopsy did not entirely explain the paralysis The patient was a woman, 55 years of age, who after some loss of power in the left arm and leg, complained of headache and double vision, with a tendency to fall to the left when walking Examination of the eye ground proved negative The loss of power gradually became more marked until paralysis became complete on the left side She then had an attack of pneumonia and died in convulsions The urine contained neither albumin nor sugar On removing the skull cap, the brain appeared at first to be normal, but on closer examination a growth was discovered involving the medulla, especially on the right side, projecting between the lobes of the cerebellum The tumor was found to be a sarcoma It was strange that with so much pressure on both sides of the medulla, that symptoms should have been produced only on the left side of the body The Sections of the College have all opened their winter sessions with interesting meetings and active discussions Dr B C Heist read a paper before the Section on Gynecology, October 15, on "Technique in Cæsarian Section," Dr Sprengle read a communication on "Prolonged Pregnancy," and Dr Chas B Penrose one on "Hysterectomy by Combined Operation through the Abdomen and Vagina " Before the Surgical Section, Dr Randolph Faries described a "Modified Form of Antero posterior Brace for the treatment of Pott's Disease " A death during the administration of ether was reported by Dr Jos M Spellissy Dr John B Roberts demonstrated a "Successful Operation for Cleft of Hard and Soft Palate," by the case of a patient Dr J William White and Dr Alfred C Wood reported on "Some Recent Cases of Renal Surgery "

The Philadelphia County Medical Society has been prospering under the presidency of Dr James C Wilson At the meeting on the 14th inst Dr F W Talley read a paper on the "Proper Position of Celio hysteropexy in Gynecology," Dr A O J Kelly reported four cases of "Essential Paroxysmal Tachycardia," and Dr Chas W Burr read a paper on "The Relation of Anemia to Chorea," in which any causative relation was denied, and the opinion expressed that when concurrence existed, it might be accidental or the anemia might be due to the chorea or to the causes which produced the neurosis

Mr William Macewen of Glasgow was recently entertained by a series of lunches and informal receptions, and received considerable attention during a recent visit to this city He expressed special interest when inspecting the new wards and recent improvements in the Pennsylvania Hospital, which is the oldest general hospital in this country

Detroit

The Michigan College of Medicine and Surgery opened with 100 students A building has been procured in addition to the college which will be used for extra clinics, general medicine and skin diseases There has also been lobby rooms fitted up for the students Dayton Parker has been elected to fill the chair of gynecology, vice E W Jenks, resigned, and W J Brand to lecture on anatomy

At the Annual Meeting of the Detroit Medical and Library Association held October 5, the following officers were elected President, H W Longyear, vice president, Frank H Walker, secretary, P C McEwen, treasurer, A P Biddle, librarian, Wm C Stevens After the election of officers, E T Tappey entertained the members of the society with a banquet

At the Regular Meeting of the Detroit Medical and Library Association held October 12, H O Walker presented some pathologic specimens, among the number being an ulcerated appendix with a fistulous opening The case was one of a history of several attacks, a suppurating kidney in which he had done a nephrectomy, also about twenty gallstones, for which the day before he had made the operation of cholecystotomy Each of the patients was doing well at the time of the report Theo A McGraw read a paper on ' The Utility of Omental Splints in Intestinal Surgery," in which he said that he felt warranted in bringing the procedure before the profession for discussion on account of its importance He also drew attenn to the fact that the omentum is extremely mobile, that it be drawn to any part of the intestinal tract that is covered h peritoneum. He said that in certain diseases it becomes ophied and in some persons is quite small, and especially s this so in tubercular subjects, where we find at the autopsy t a small remnant of the omentum. The Doctor said that at was characteristic of all peritoneal membranes was also of the omentum, the short period it takes to fasten itself to irritated surface and so acts as a bearer in preventing intra itoneal suppurations from becoming diffused, and that local d abscesses are frequently found in which the omentum has n the means of holding the walls intact, that a piece of entum applied over an intestinal fistula will after twenty r hours make a strong obstacle to the discharge of feces, d what is very desirable, this omental splint is very tolerant its surroundings, also that the practical value of the omen m splint is its application in wounds and fistula of the large estine, and that it made a safe union in operations on this cus. The essayist called attention to the fact that inflam- itions of the appendix are liable to result in suppuration uch invades the connective tissues behind the gut, that an scess also acted in the same way and might affect a large rtion of the intestine. When a bowel under such circum nces became torn or ulcerated through, its repair was excep nally difficult. He found that Lembert stitches in that gion were out of the question, as there is no peritoneum in ese desperate cases. There were only two successful proce res, one of which is the resection of the affected portion, and e other the closure of the fistula by an omental splint. He ported two cases which he had had at St. Mary's Hospital r C., aged 24 years, entered St. Mary's Hospital Jan. 1, 1895, th a suppurating appendicitis. The abscess was opened, and leaving the hospital after recovery, he was cautioned to turn at once for operation if there should be any recurrence November 26 he returned with renewed inflammation in at region, the appendix was removed and the adhesions oken. There was no rise of temperature or sepsis, but on e third day there appeared some thin feces on the edge of e wound, and it became necessary to remove the stitches he discharge of feces from the wound increased daily in quan ty, and soon there was an opening in the gut the size of one's tle finger. Practically no feces passed through the rectum d anus. Lembert stitches for this false anus were out of the estion on account of the absence, over a large area, of both uscular band and peritoneum. An incision was made in the ritoneum over the gut to the extent of 2½ inches, through hich cut the omentum was drawn out and fastened with tures all around the exposed part of the bowel, tucking well own behind and under the intestine. On the next day he had normal evacuation of feces. That which could not be accom lished by purgatives or enemata took place spontaneously, as on as the mechanical integrity of the bowel was restored. A an aged 39 years entered St. Mary's Hospital Dec. 11, 1895, th chronic appendicitis. On December 13, the appendix was emoved and the wound closed. A month later the wound eopened, fecal matter began to pass through it, and on his eturn to the hospital he was too weak for operation. About hree weeks later, his general condition having improved, the bdomen was again opened. The omentum was then brought own and wrapped in a large fold around the diseased bowel, nd fastened with sutures to the neighborhood of the wound, o that the wound was completely enveloped by it. Three eeks later he was sent home completely cured of his fecal istula. From these two cases it must be conceded that the alue of omental splints under these conditions is obvious yet r McGraw said that he should lay it down as a rule that, henever a lesion of a large intestine demanded a suture, the ne of union should, if possible, be supported by a thick layer f omentum, but that in wounds of the small intestine, this procedure was not necessary, although he would feel more safe from accident with this additional safeguard.

THE WAYNE COUNTY MEDICAL SOCIETY at its annual meeting October 1, elected the following officers: President, Geo. E. Frothingham; vice president, Lewis E. Maire; secretary, J. F. Patton; treasurer, C. Henri Leonard; board of directors, E. B. Smith, Frank S. Hough, T. J. Parker, O. P. Eaton and Kenneth Gunsolus. On the same evening the retiring president, E. B. Smith, read his annual address, after which the retiring secretary, Frank S. Hough, presented his report, which was approved. At the regular meeting of the Society October 8 (memorial night), E. B. Smith read a biographic paper, taking up the lives of Wm. Brodie, who had been president of the Wayne County Medical Society a number of years; Henry F. Lyster, S. D. Richards, C. J. Lundy and August Kaiser, all of whom had been prominent members of the above society.

Annual Report of the Surgeon General of the Navy.—Surgeon General Tryon, chief of the Bureau of Medicine and Surgery, has submitted his annual report to the Secretary of the Navy. Estimates have been submitted for two ambulances for use at the naval hospital at Portsmouth, N. H., and Mare Island, Cal., where they are urgently needed.

"The cemeteries of the several naval hospitals have had very little done for them since the war and in no way creditable to government establishments," says the Surgeon General.

"Special appropriations will be required for each one to place them in a condition that they can be cared for in the future by the hospital force.

"Attention is again called to the necessity of providing improved accommodations for the sick and wounded on board vessels of war, and to the assignment, when practicable, of sufficient space on the gun deck for hospital purposes."

The Surgeon General says that the passage of the bill organizing the army hospital corps has already proved of great benefit to the militia of the different States, and the passage of a similar bill for the navy would also be advantageous to the naval militia, now being rapidly organized.

AMBULANCE OR HOSPITAL SHIPS.

A strong argument is made for ambulance or hospital ships specially fitted up. Considerable attention is now being paid to the construction of such vessels abroad, and it is universally conceded that they should be designed and built for this particular duty, and considered an essential part of the fleet of war.

The health of the navy is reported as good. The care and comfort of the sick and wounded of the navy have been much improved by the adoption of iron swinging cots for sick bays of all vessels, and the establishment of an ambulance service at the naval hospitals at Chelsea, New York, Philadelphia and Norfolk.

FOOT BALL AT ANNAPOLIS.

In a short chapter about the Naval Academy, the Surgeon General says:

"The good health of the station has been maintained throughout the past year. There were nineteen admissions, involving sixty one sick days, for injuries received at the game of foot ball, and ninety excuses from drills from the same cause. The injuries consisted of one luxation, two fractures of bones, one inguinal hernia, two cases of concussion of the brain, and a number of minor sprains and contusions.

"Attention is called to the unsuitable character of the academy buildings, many of them being badly ventilated, unsatisfactorily lighted and heated, and some of them in a condition almost beyond repair.

"The sewerage system of the academy is defective and unsatisfactory, and proper means should be adopted for carrying the sewage into deep water at some distance from the academy grounds.

IDENTIFICATION OF RECRUITS.

In regard to the identification of recruits, the Surgeon General says:

"In consideration of the effect upon the discipline and general tone of the enlisted force of the navy, the importance of preventing deserters and dishonorably discharged men from re entering the service has caused the question of the identification of such undesirable persons to be carefully investigated.

"The anthropometric system of M. Bertillon presents the advantages over other methods of conformity to scientific requirements and capability of indefinite expansion.

"The system employed by the United States army is a modification of the above, in which personal marks or characteristics take the place of anatomic measurements, and since its adoption in 1889 has been attended with excellent results, as shown by the detection of a large number of deserters and the progressive diminution in the number of undesirable candidates presenting themselves for enlistment"

The bureau is at present considering some plan of combining, modifying and selecting from these two systems a method especially adapted to the requirements of the naval service

VACANCIES IN THE MEDICAL CORPS

The continued impossibility of filling vacancies in the medical corps is reverted to by Surgeon General Tryon in the following words

The record during the last fiscal year is nearly a repetition of the figures presented in the last annual report There were 341 applications made to the department for appointment as assistant surgeons in the navy Out of the number only thirty six applied for permission to appear before the naval medical examining boards

Of the 36, 22 availed themselves of the opportunity to appear before the boards, and of this number there were 4 rejected physically and 12 rejected professionally leaving only 6 out of the 341 original applicants, representing every section of the country, who were found qualified for appointment as assistant surgeon

This state of affairs has existed for years, and will undoubtedly continue until there is some favorable legislation for junior medical officers of the navy

At this date there are 10 vacancies in the grade of assistant surgeon, and the bureau is embarrassed by not having a sufficient number of medical officers to fill important stations ashore and afloat

Many ships and hospitals are kept without their legitimate quota of officers, and, unless this is in some way speedily remedied, by reason of increase of men in the navy and number of new ships placed in commission annually, serious consequences must follow On account of the great number of vacancies existing and the probability of the number increasing instead of diminishing, it is strongly urged that the recommendation contained in the bureau's letter addressed to the department on the subject, dated Feb 8, 1896, be approved, that "a special law be enacted authorizing the Secretary of the Navy, during the present exigency, to appoint acting assistant surgeons for temporary duty in the navy until the number of vacancies in the regular medical corps of the navy are filled" When this is accomplished, their services can be dispensed with and no further appointments made, except in time of war or until additional vacancies occur in the assistant surgeons' grade

In regard to local institutions, Surgeon General Tryon says

WASHINGTON NAVY YARD

The sanitary condition of the yard during the past year has not been satisfactory During the summer and autumn months malarial fever of a severe type prevailed extensively, a large proportion of the cases being of a remittent character During the year there were 250 admissions and 48 readmissions to the sick list Of this number 216 returned to duty and 79 were transferred to hospital

There was a loss of 1,021 days from sickness, due principally to the large number of cases of malarial fever

Reports have been received that apprentices transferred from this yard to other stations all suffered from attacks of malarial fever, undoubtedly due to climatic exposure while undergoing instruction at the yard

MARINE HEADQUARTERS

The health of the post has been satisfactory during the past year except that in the months of September, October and November an unusually large number of cases of malarial fever prevailed, which undoubtedly was caused by the insanitary condition existing at the navy yard, which was made the subject of a report by a sanitary board to the department in May, 1895

Beyond some minor improvements in the introduction of modern water closets and bath tubs, there has been no change in the general sanitary condition of the post

NAVAL HOSPITAL

No material changes have been made during the past year in the hospital grounds The paving of 10th street east which has been commenced, will add much to the comfort of the hospital patients The hospital is now being furnished with a modern operating room, properly equipped for the performance of operations, and it is hoped that it will be completed at an early date

The necessity for increased accommodations for the sick at this establishment is apparent

The records of the hospital for the five years 1891 to 1895, inclusive, show 36 admissions of officers, with a total of 1,265 sick days, other admissions, sailors and marines, number 528 Patients are supplied to this hospital chiefly by the navy yard and marine headquarters, but from time to time they are transferred here from other hospitals, from coast survey vessels and from other vessels, foreign or belonging to our own navy, which may be in port, also old sailors and marines on the retired list who have no suitable home and when taken ill find a refuge here

The officers attached to the navy yard and marine headquarters number about 50, while the number of sailors and marines is about 240 Beside the above, there are in and about Washington 250 or more officers, active and retired, liable to need hospital accommodations and treatment

The situation of the hospital is excellent, occupying an entire square of land on four streets, having thus abundant sunlight and fresh air The elevation above the navy yard is inconsiderable, but sufficient to make a very great change perceptible in the condition of malarial patients transferred The mere change from the one place to the other has sometimes sufficed to put a stop to an attack of malarial fever

There is but one separate room in which a sick officer can be isolated Additional accommodations should be provided, so that the whole of the two principal floors could be allotted to patients, the lower or main floor and the second floor to the enlisted men The medical officers on duty should be lodged in an annex, which could be easily built within the present grounds and in connection with the hospital proper, and an appropriation with this object in view should be submitted at an early date

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THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Oct 17 to Oct 23 1896

First Lieut Benjamin Brooke Asst Surgeon, leave of absence granted on surgeon's certificate of disability is extended one month on surgeon's certificate of disability

Major Clarence Ewen Surgeon, leave of absence granted on surgeon's certificate of disability is still further extended one month on account of disability

First Lieut Charles F Kieffer, Asst Surgeon (Ft Crook, Neb), is granted leave of absence for two months to take effect upon the completion of his duties with the Third Artillery

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending Oct 24, 1896

Asst Surgeon M S Elliott, ordered to naval laboratory and department of instruction, New York

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LETTERS RECEIVED

Anderson Winslow, San Francisco, Cal, Alta Pharmacal Co St Louis Mo

Bausch & Lomb Optical Co, Rochester, N Y, Burr C B, Flint, Mich Bishop S S Chicago Burdett Browntree Mfg Co, Chicago, Beard R O, Minneapolis Minn, Bailey William Curtiss, Las Vegas, N M Boehringer C F & Soehne, New York N Y

Cleary W P New York, N Y, Colvin, D, Clyde N Y Clouse, Geo M, Columbus, Ohio Carter, Howard, St Louis Mo, Cutler, H G, Chicago Cooper J M Johnstown Pa

Dunlap, A J Chattanooga, Tenn Dewees William B (2) Salina Kan Deschamboult, T A Manitoba, Canada, Dunshie, J F, Puerto Barrois, Guatemala

Erwin A J, Mansfield Ohio

Gould George M Philadelphia Pa Gihon A L, New York, N Y Graef Chas & Co, New York N Y

Haralson H H Biloxi Miss, Holton, Henry E Brattleboro Vt Holland John W Philadelphia Pa, Hayes, R H, Union Springs, Ala Harrison R H, Columbus Texas, Hummel, A L, Adv Agency (3) New York N Y

Keller J M (2), Hot Springs Ark, Kiernan Jas G Chicago Klebs, Edwin Chicago Kendall H W Quincy Ill, Kellogg A C, Portage Wis, Kingsbury G C Mt Carmel, Ill

Ludwig Henry C, New York N Y Library Bureau, Chicago Lea Brothers & Co Philadelphia Pa Millard, M R, Detroit Mich McAlister Alex Camden N J McCurdy S I Pittsburg Pa, Merrick M B, Passaic N J, Maltine Mfg Co New York, N Y, Morton John P & Co Louisville Ky Madden, John, Milwaukee Wis, Manley Thos H New York N Y

Porter Joseph Y Jacksonville Fla, Probst C O, Columbus Ohio Parker James W Warsaw Ill Patterson C E Grand Rapids, Mich

Reynolds Arthur R Chicago, Reynolds Dudley S Louisville Ky Riley W H, Boulder Colo, Radcliffe S J Washington, D C, Romeille Henry New York N Y

Smith Louise Eleanor Chattanooga Tenn Stoakley, Wm S, Millboro Springs Va Surgeon General U S A Washington D C Schofield A J Tilden, Neb, Strueh, Carl Chicago Steele G A Havana N D Strecher J E, Chattanooga, Tenn, Sheets, John Philadelphia Pa

Tuley Henry E Louisville Ky

Van Nostrand D, Company New York N Y

Woodbury Frank, Philadelphia Pa

The Journal of the
American Medical Association

Vol XXVII CHICAGO, ILL , NOVEMBER 7, 1896 No 19

ORIGINAL ARTICLES

OPERATION FOR THE CURE OF HERNIA VIEWED FROM A MEDICO-LEGAL STANDPOINT

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5 8 1896

BY HENRY O MARCY, M D
BOSTON MASS

The revision of the duties and obligations which the medical profession owe to their constituency must be made in every advancement of science From this standpoint it is pertinent to inquire, if the demonstration of the easy and safe cure of hernia is not sufficiently ample to demand from our profession a revision of opinion, which only a brief period since would have been accepted as unquestionable? Few will deny that every sufferer from hernia, even in its less pronounced forms, is not alone incapacitated in a considerable degree for the discharge of certain duties incumbent upon a great variety of occupations, but also that there is a recognized life risk, incident to the individual This has long been accepted in life insurance, examinations for the public service, etc It is also conceded that, at the best, instrumental supports are disagreeable make shifts, and that the usual history of the subject of hernia is an increased physical disability

From the medico-legal standpoint, may it not be considered as an open question, whether this entire class of sufferers have not rights which should be respected, when such life interests are entrusted to the watchful supervision of their medical and surgical advisers If this be true, does the surgeon discharge his full duty to the one seeking his advice, disabled in large degree from an irreducible or uncontrollable hernia, who offers *simply* the palliation of rest, condemning the patient to the wearisome watching for relief which only death can give? If such queries throw a new light upon the ever increasing burden of responsibility, which the advancement of science places upon him who would be its exponent, what becomes the plain duty of the physician, the rank and file of the profession, who are ever in close touch with this great army of invalids, and, as a consequence, must decide promptly the course to be taken in the constantly recurring cases of intestinal obstruction caused by strangulation?

I need not cite even recent experiences to show the still high death rate in all hospital practice, occurring from delayed operations for the relief of intestinal constriction, delays made fatal not by the gravity of the operation itself, but by the conditions which render operation necessary

The early operation for the relief of these conditions is attended by a very minimum of danger, which, however, increases in geometric ratio with every passing hour, and yet the average sufferer from acute intestinal obstruction from hernia, is liable to neglect at the hands of his medical adviser, and it is the object of this paper to emphasize this neglect as criminal before the law There is but one duty for the physician Immediately upon the recognition of the condition, relief must be afforded Taxis is no longer warrantable as advised at an earlier period, since this alone often inflicts irretrievable damage upon the constricted intestine An anesthetic should be at once administered and, if in the relaxed condition of the parts, gentle manipulation does not restore the displaced organ, the operation must be immediately performed

It is not necessary to give examples of almost daily flagrant violation of this simple, surgical axiom In my experience the series is long and includes many instances which have come under my observation as a consultant, where from a medico-legal standpoint, I unhesitatingly declare that the neglect of prompt surgical procedures was criminal

Appealing to the fear of the individual is one of the most reprehensible ways of quickening his conscience, especially in our profession, the members of which are supposed to be actuated in the discharge of their duties to suffering humanity only by motives of the highest and most praiseworthy character Courts of law are constantly dealing with questions of damage, arising from alleged incompetence, because of the improper restoration of fractures and dislocations, injuries from which a life risk may never be involved and on account of this surgeons are constantly thoughtful to guard against medico-legal complications, seeking consultation for self-protection much more than for the benefit to be derived by the patient If this was recognized as a possible sequel to every case of the severer forms of hernia under supervision, it would be of great advantage to the patient, to the physician, and the profession at large

The causes of hernia should be much more carefully studied and understood A thorough anatomic knowledge of the parts involved, their functions, and pathologic changes must be acquired Such knowledge is of the first importance in many medico-legal cases Indeed, the general opinion is that hernia is produced by some violent strain, or accident, for which in the general mind the term rupture is a synonym, that is, a sudden giving away of the parts involved A superficial study of the case might lead one often to arrive at this conclusion This is so exceptional that it represents a very minute fraction of the total

I was called as an expert in court where a town had been sued for large damages, the injury claimed to have been received by a man in middle [illegible] the consequence of a fall into a hole in [illegible] came ruptured The hernia was [illegible] inguinal type, and doubtless was the [illegible] series of antecedent causes, probably commencing in a congenital non-closure of the canal Yet the jury awarded the claim and damages, more from the general belief that such injuries must be the result of sudden violence, rather than from the testimony offered

On the other hand instances are not wanting where injuries have been inflicted upon large scrotal hernias, even resulting in death, and here may arise a nice point at law, to determine if the individual is liable to recover under such circumstances, when modern surgical opinion teaches that such a man is in daily possible risk to his life from a condition which is amenable to cure by surgical interference of moderate danger

In this phase of the subject there is also a very constant factor of a material type represented by a money equivalent This has its exponent in the large number of soldiers of the late war borne upon the pension rolls, disabled because of hernia Some time ago at a meeting of a large number of surgeons, it was desired that I should give a demonstration of my method of operating for the cure of hernia before the members in attendance A proper case was selected by a local surgeon, the man having been for years under his observation partially disabled on account of a large scrotal hernia The suffering was freely acknowledged, the desire for relief so great that preparations for the operation had been partially arranged It was finally refused, the sufferer admitting that the hernia was worth to him as a pensioner of the United States government $150 per year, and that he would rather endure the disability, than deprive himself of his assured income

I have no hesitancy in declaring that it is the duty of the government to afford this large class of sufferers free of expense, an opportunity to be cured of this troublesome and dangerous affliction, and in the event of their refusal to accept the same, order that the pensioner's name be stricken from the roll

The statements made in this brief paper may seem radical to many, indeed to a degree revolutionary, but I offer them in the full conviction that they are the expression of a just surgical conservatism, and I believe the time is not distant when they will be accepted and amplified

I look upon the verdict of this Section of the Association to which this contribution is offered as most important in establishing a new status of opinion upon a surgical subject which must be far reaching in results, involving not only large monetary interests but also pregnant with the salvation of many lives

DISCUSSION

Dr Hughes—I think the suggestions are practical, new and destined to prove of great value to mankind I think the surgical section ought to join in their recommendation, that the pensioners should be offered the opportunity to secure the advantage suggested in the paper I would not say that they should be *compelled* to do that or throw up their pensions I doubt if this can be done under the law The Constitution of the United States provides that no man can be mutilated in any way We used to have a law in the State of Missouri providing for the castration of men who committed rape It stood on the statute books until some astute lawyer carried it to the supreme court, and it was declared unconstitutional

Dr Moyer—I was glad to hear Dr Marcy refer to the relation of accidents to hernia More than ten cases have been sent to me for examination by attorneys, claiming that the rupture was caused by a fall or sudden injury In nine of those cases I gave the opinion that I did not believe that injury and accident caused hernia

Regarding the doubtful case, the rupture was not at the usual site, but was at the linea alba, midway between the umbilicus and the pubes

Dr Hughes—I would like to ask Dr Marcy whether he maintains in that paper that accidents are not frequent exciting causes

Dr Marcy—I do not

Dr Moyer—I think, however, that is the later and more general view of the matter

Dr Hughes—I have always been under the impression that it is a frequent cause Anyone who is intimately familiar with the personnel of soldiers, and has had large numbers of them to treat—I had an average of 10,000 men under my care during the war in what was called a "straggler's camp"—has doubtless had considerable experience with hernia Men were constantly coming to me to be examined whom I had in my own command, and whom I had examined personally as to whether they had abdominal or inguinal hernia, finding them apparently sound in that regard—these very men, would develop hernia from the time they were forced suddenly to jump out of cars, owing to a surprise or an attack I never supposed that the sudden jar was the cause of the hernia, but was the exciting condition

Dr Bishop, of Pennsylvania—If Dr Marcy's paper would convince people that the operation is comparatively a safe one, and that the danger by not having the operation is greater it would certainly be well Trusses are as dangerous as patent medicines

Constant tension—railroad men getting on and off trains, plasterers or painters working overhead, etc, has a tendency to precipitate this trouble I have advised the use of suspensory bandages in such cases

Dr Marcy—A careful anatomic study of the inguinal canal in the male exhibits one of the most beautiful of nature's provisions for protection and safety The cord traverses the abdominal wall in an oblique direction, so pronounced that the intra abdominal pressure causes a complete approximation of the walls of the canal, acting always, when in the normal condition, at or near a right angle to its axis The transversalis fascia is extraordinarily strengthened and thickened so as to produce a firm, inelastic support posteriorly, while the internal ring is reinforced about the cord in a way to prevent a peritoneal depression about its upper border The testicle finds its way out of the abdominal cavity at such a late period of the intra uterine life that the developmental processes, which result in the normal closure of the canal just referred to, are often imperfect When not complete there results a depression in the peritoneum above the cord, which affords a point of yielding to the intra abdominal pressure, although it may never result in hernia Often this condition remains unnoticed until in a later period of life, when the muscular tonicity of the abdominal wall is lessened, a yielding occurs, and by a slow process hernia develops This I believe to be the common cause of inguinal hernia in the male Any one who will take the trouble to examine postmortem will note that traction upon the cord in a very considerable percentage of adults demonstrates this condition more or less marked, although it has never advanced to a degree which allows the protrusion of any portion of the abdominal contents into or through the canal Cloquet, of Paris, in the earlier part of this century, made careful dissections of 500 cases of hernia subjects, recording minutely the conditions found He describes and figures a condition of normal anatomy under the name of the infundibular process of the peritoneum I can not doubt but that which he describes as normal is pathologic, and results from imperfect closure of the canal in the early months of existence

That muscular strain of itself in the normal individual is not the cause of hernia is evidenced by the extraordinary play of muscular activities in the gymnast, who in every conceivable way exercises an enormous strain upon the abdominal wall, yet so far as I have been enabled to learn the circus athletes and rough riders of the West are not more liable to hernia than are those of less active occupations

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USE OF THE STOMACH AND RECTAL TUBE IN CHILDREN

Read in the Section on Diseases of Children at the Forty Seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY W JAY BELL, M D

Assistant to the Chair of Obstetrics and Clinical Gynecology, Southern Medical College ex Assistant Resident Physician of the New York Infant Asylum

ATLANTA, GA

I am fully aware that the stomach and rectal tube is not so generally used in the south as in the north and northeast Having followed their use so closely during my service on the staff of the New York Infant Asylum and since my location in Atlanta, and having such pronounced beneficial results following their use, I am constrained to present a short paper on the subject before this body

We may well deem our age the most practical in the world's history and we find theory quickly receding to give place to the tangible and practical

The approaching warm season causes one who handles the little ones to stop and reflect for a time upon the too often fatal ileo-colitis and gastro-enteritis There is nothing to be found infallible in medicine nor in means, yet we must accept all available means and apply them judiciously yet assiduously

Often one will be called in to a little patient with a history that the child takes food well, even hungrily, but in a short time suddenly vomits the sour contents of the stomach, this result following each feeding Now, all are familiar with ferments A fermentative state often accrues in the stomach causing fermentation of the stomach's contents with irritation and consequent vomiting, yet the vomiting does not entirely free the stomach of ferment, there being a nucleus of fungus remaining which infects the next food taken and persistent vomiting is the expected consequence Then what steps must we take to relieve this class of cases? The cause of persistent vomiting is retained ferment Then the most practical step will be to remove this factor of irritation It is in this class of cases that the most happy results are obtained from a thorough irrigation of the stomach

Imperfect digestion is frequently found in the little patient, this may be due to want of digestive power or fermentative interference with digestion An irrigation of the stomach two or two and one-half hours after feeding and giving a subsequent rest of at least one hour will be met with gratifying results Athreptic or poorly nourished conditions are found due to a failure of the child to take nourishment, in these cases gavage is often necessary and will often be followed with happy results In this the same tube may be used, being careful to cleanse

It was our custom in the New York Infant Asylum to use a tube, which consists of a funnel of glass or hard rubber, with a piece of tubing two or three feet long, to the end of this is attached a small stomach tube or large catheter having a small piece of glass tube intervening for observation This is a complete tube for either feeding or irrigation With tube, a pitcher of warm water and a slop jar or pan you are fully equipped With the patient in the lap of an attendant or mother, having the face to the physician, the tube is moistened and with the left index finger as guide pass the tube steadily into the stomach, with funnel raised above the patient's head fill the stomach to full capacity and, lowering the funnel, syphon off the stomach contents, repeating this until all return is clear After irrigation a rest of about one hour should be given the stomach before giving nourishment Flax seed water for a few feedings is best

Gavage is accomplished by passing the tube and pouring into the stomach the amount of nourishment desired, being careful to compress the tube and hold the mouth well open for a moment after the removal of the tube until irritation of throat passes off, which will prevent regurgitation The stomach tube is useful in many other forms of gastric irritation, but I will not go further It is, indeed, a most practical instrument to have on hand at all times and especially in cases of poisoning

The rectal tube is far more generally used than the stomach tube Dr Seibert of New York, says that the first thing that he does when called in to a case of convulsions in a child is to draw out his fountain bag, call for a pitcher of hot water and proceeds to irrigate the colon at once While the contents of the rectum and colon are not the sole cause of convulsions, yet such a vast majority of these cases are due to, or irritated by bowel contents that the step is a most wise one The apparatus which I use and which is used in the New York Infant Asylum, consists of a fountain bag with a small stomach tube attached, and no better apparatus could be devised except that a return attachment may be used The indications for the use of the rectal tube are so manifold that it would require too much time to do more than briefly refer to some of them It is fully established that the rectal and colon contents are often most potent factors in hyperpyrexia I have observed in a number of cases a marked fall of temperature from irrigation of the colon

In ileo colitis, gastro-enteritis, fermentative and catarrhal colitis, cholera infantum and other forms of fermentation and infected bowel contents, most gratifying results will often follow the use of the tube in high rectal and colon irrigation Now, it is important that not only the rectum but also the colon should be irrigated The tube should be passed as high up as the transverse colon which can be easily accomplished, with the child in dorsal position on slightly inclined board, table or bed, the tube is vaselined and passed with a slight rotary movement bearing in mind the course of the rectum through the curve of the sacrum and upward over promontory to the left, and the tube will pass readily into the colon and up with ease to the transverse colon when the stream is turned on and continued until bowels are thoroughly irrigated

Efforts to influence the fluid to pass up the colon by placing the child on left side and lowering the head and the trunk, is to me quite unsatisfactory and but slight cleansing effect can be obtained in this way, but with the tube well up into the colon, a far more satisfactory irrigation can be accomplished

In persistent dysentery I have obtai d good results from irrigation, after w [illegible] xseed water with a small amount o [illegible] In cases of gastro-enteritis I hav [illegible] s follow irrigation of both stomach and rectum and am convinced that this step would be wise in a beginning cholera infantum, using rectal irrigation quite hot for stimulating effect and to this may be added a small amount of salt and alcohol In habitual constipation the use of the rectal tube is preferable to a too frequent use of laxatives In this, however, a high irrigation is unnecessary Irrigation is a step that should always be taken in cases of convulsions in children

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INFANTILE SCORBUTUS

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY ALBERT H BURR, PH B , M D

CHICAGO

Dr William P Northrup, editor of the chapter on Scorbutus in the "American Text-book of the Diseases of Children" (1895), says "The reader will find in this book for the first time scurvy put down as a disease occurring in the United States" It is barely two years since he tabulated some twenty-six American cases, and directed attention to a disease of infancy hitherto overlooked in this country because of its rarity or because of failure in differentiating it from the somewhat kindred disease of rickets, since that time the interest awakened by the discussion of Northrup's papers has brought out reports of a number of cases from observers in different parts of the country From this it would seem that the disease is assuming greater importance by reason of its increasing frequency in these days of degenerate mammæ, supplemented by the growing indisposition of American mothers to suckle their young, on the one hand, and on the other by the commercial enterprise and ingenuity of man in devising sterilizers and proprietary foods to meet a long-felt want in the failing maternal fluid and motherly instincts Between these physical and mental degenerates and the chromo-advertised infant foods, represented as perfect(?) substitutes for mother's milk, the coming baby must run fearful odds in its unequal struggle for existence Authorities tell us that 25 out of every 100 babies die before the end of the first year, and of these 25 only 4 die at the breast while 21 perish at the bottle What sadder comment is to be found on modern civilization?

To W B Cheadle of London is due the credit of first recognizing infantile scorbutus on clinical grounds In 1878 he published three cases on account of spongy gums, and obscure symptoms referred to the lower limbs, which he maintained were cases of true scurvy Soon after this, Thomas Barlow commenced his postmortem investigations and immortalized his name by establishing a pathologic basis for the disorder, which German writers had described as acute rickets The results of these valuable and conclusive labors he published in 1883 and confirmed the views of Cheadle Barlow's classic review of the disease in his Bradshaw lecture of November, 1894, leaves but little to be added to our knowledge of this, now inexcusable and easily prevented, disease

Etiology —Briefly stated, he says "The prolonged use of a defective diet induces the symptoms"

Pathology —"The essential lesions are subperiosteal blood extravasation and its secondary sequences," hemorrhages into the center of the shafts of the bones, producing absorption of the trabeculæ and leaving them brittle and easily fractured effusions of blood into surrounding muscles and cutaneous tissues, with progressive anemia resulting from these multiple hemorrhages

Diagnosis —The diagnostic differentials between scorbutus and rickets are of chief interest and consist in the hemorrhagic phenomena and their sequelæ, the pseudo-paralysis, spongy gums where teeth are present and the rapid, almost magical improvement under antiscorbutic diet

The following case came under my care Dec 12, 1895

Dorothy R , thirteen and a half months old, had been brought to Chicago from a distant State by the advice of the family physician to be treated for a supposed spinal trouble She was placed under the care of one of our best orthopedists The diagnosis was rachitis, with slight spinal curvature As the child was too weak for any corrective appliances the specialist addressed himself to general tonics and restoratives with the view of improving the anemia and malnutrition At the end of six weeks the child, which at first seemed to be materially improved, was found to be decidedly worse, and for two weeks had not been able to lift its head from the pillow Emaciation was progressive and the specialist expressed the opinion that the case was hopeless and the child must soon die from marasmus

The history as given by the mother was this Up to eight months of age the child appeared well nourished and in the the best of health About this time it became fretful, grew pale and began to lose flesh Purple spots appeared over its shoulders, back and thighs, which suppurated and many of them were lanced, leaving marks similar to the pitting of smallpox The lower extremities were painful on being handled and the child ceased to move them voluntarily Its diet from birth had been Mellin's food exclusively The mother had lost her ability to nurse on account of multiple abscesses of her breasts at a previous birth

At this time the child was very anemic and much emaciated, weighing but thirteen and a half pounds It could not lift its head nor move its body or thighs, and was handled on a pillow The right femur and left scapula were perceptibly swollen Dentition was delayed The upper and lower middle incisors only were erupted and these were almost hidden by spongy ecchymotic gums In the roof of the mouth was a purplish tumor with an eroded apex The fetor of its breath was marked The body was bathed in sweat The stools were hard and variegated in light drab and dark slate colors, with an offensive odor like those of a carniverous animal The child cried with pain on being handled and was fretful and wakeful during the nights This array of symptoms completed a picture of pitiful distress

Treatment —The food was changed at once to fresh cow's milk and barley flour as a basis Orange juice and raw scraped beef were given daily, which the child took with the greatest avidity Scraped apple and tender sprigs of fresh lettuce and cabbage were also allowed by way of variety A cool sponge bath at 75 degrees with gentle friction was given every morning for its tonic effect To change the character of the stools and disinfect as far as possible the intestinal tract, calomel tablets, one-tenth grain, every two hours, and a powder composed of guaiacol carbonate, one-sixth grain, and protonuclein, one grain every four hours, were ordered given Hydroleine was administered three times daily, for its alterative and reconstructive properties The improvement even in so short a time as twenty four hours was gratifying and astonishing At the end of forty-eight hours the character of the stools were changed and the fetor of the breath had disappeared and the child was inclined to amuse itself After the fourth day it could lift its head and its nights were restful At the end of the first week all traces of spongy gums and sore mouth had disappeared and it began to laugh and crow and exercise its legs and thighs and no longer dreaded handling At the end of the second week it had gained one pound, could lift its feet above its head for the first time in several months All remedies, except hydroleín and occasional doses of mild chlorid, were now discontinued A soft-boiled egg with rolled cracker was allowed every other day alternating the scraped beef Third week, anemia has disappeared Can sit alone Has erupted upper lateral incisors Three weeks ago there was no sign of these teeth Is taken out daily for exercise Fourth week, has gained in weight, rolls about on the rug and tries to creep Discharged cured and returned home at end of six weeks A change like this after six months of helplessness and untold suffering seems little less than magical

The points of interest in this case are The suppuration of the hemorrhagic cutaneous lesions, which the family physician diagnosed and treated as eczema, the swelling of the femur and scapula and slight curvature of lumbar region, diagnosed and treated for six weeks by a noted orthopedist as rickets, and lastly the rapid recovery under antiscorbutic treatment

The foremost problem in the consideration of every disease is how to prevent it Scorbutus is a preventable disease How shall we guard against and limit this recently diagnosed and apparently increasing disorder? We will not find it in the homes of the poor, or among the laboring classes, so often as among the well to do and in the houses of affluence, for the mothers in the commoner walks of life more uniformly suckle their babes, and this is prophylaxis Barlow says "In no single case at the time of the malady has the child been breast fed "

1 Woman herself should be physically prepared for better motherhood so that she may be capable of yielding her offspring the only food nature intended for it

2 Mothers should be impressed with the fact that there is no perfect substitute for breast milk, and that next to the right of being well born, the babe has an inalienable right to nature's food, and no trivial excuse or surmountable difficulty should hazard its life or health

3 Where for any reason the breast milk is inadequate, or has entirely failed, the nearest approach to it is to be found in the modified cow's milk of our modern laboratories, or the home modification of cow's milk after the plans given by Rotch in his most valuable recent work on pediatrics

4 Above all, *no continuous* administration of any sterilized, Pasteurized, peptonized or condensed milk, or any dry commercial foods should be given to the *exclusion of fresh or raw elements of diet* In what this antiscorbutic property consists, which is found in fresh foods, and lacking in the artificially prepared and manipulated foods, is not yet determined, but it is more than likely that the important offices performed by the normal germs of the gastro-intestinal tract in the complicated processes of digestion are incapable of being completed with artificial food, and thus putrefactive changes in imperfectly digested pabulum, lead to auto-infection and malnutrition

There is a "borderland condition," as Barlow terms it, without detected lesions, a sort of *scorbutic malnutrition*, which the physician should be on the look-out for in every artificially fed infant I believe scorbutus exists in incipient forms of malnutrition to a greater degree than is commonly apprehended The causes must be in operation for a more or less prolonged period to produce apparent lesions In its typical form it is rarely seen before the latter third of the first year Happily for most bottle fed infants they are saved from the active stages of the disease by the timely admission of certain elements of antiscorbutic diet It is to this class I would call especial attention The physical condition of the child during the first eighteen months of its existence is of the utmost importance to its future It is the period of most active and rapid development, and malnutrition now will weaken its vital powers of resistance for its whole life

Some of the premonitory symptoms are fretfulness, aversion to being handled, crying out as if in pain when lifted, tenderness of the lower limbs and indisposition to move them, and progressive anemia The diet should be investigated and appropriately regulated and the parents or others having the care of the child should be instructed as to the necessities of the case for intelligent cooperation

If every artificially nourished babe could be carefully inspected and its diet harmonized with the cardinal principle pointed out by Barlow, Northrup, Rotch and others, a great army could be saved from premonitory malnutrition, of which the fully developed scorbutic forms but a small contingent

2036 Indiana Avenue

DISCUSSION ON PAPERS OF DRS BELL AND BURR

Dr W A Dixon, Ripley, Ohio—The use of the stomach and rectal tube can not be too much impressed upon the profession Children are badly fed, and after the stomach is once loaded and the bowel is disturbed by food that is doing injury or damage, you must or *ought* to use the stomach and rectal tubes I use them a great deal and to a very great advantage Dr Burr's timely paper had reference to artificial feeding I believe if the profession is cursed by anything at all, it is by the impression abroad that children must be fed by the bottle and by these artificial foods I believe we are running in the wrong direction as a profession when we permit and submit to the weaning of the child, the taking away from the breast simply because we have inflammation of the breast We ought to interfere if we are the attendant at the time of confinement, or, if we are the family physician, we ought to anticipate these troubles, we ought to step in beforehand and announce to the mother that she must be prepared to nurse her child, and portray to her all the troubles that follow if it is nursed artificially Nothing has brought more sorrow to me in my practice than to treat children fed artificially, and hence I lay great stress upon impressing upon the mother the importance of being prepared to nurse the child at the breast, and I take great censure upon myself if I allow mammitis to follow

Dr Foster, Deering, Me —I would like to ask Dr Bell, before he goes, how often he irrigates the stomach?

Answer In the case of imperfect digestion, the process of irrigation should be continued until you have obtained a degree of digestive power The stomach should be tested to see that it digests the material, and the irrigation should be continued until the stomach can digest the food given Of course, using the predigested food assists this process

Dr J A Work, Elkhart, Ind —In this process of irrigation, I would like to ask the Doctor, does he propose to empty the stomach of everything or only undigested food?

Answer It should be cleaned thoroughly at the time of the irrigation

Dr J A Work—How is he to do that when the child is fed upon milk and has a high temperature and the milk is coagulated in the stomach? How is he going to get the food [illegible] without emesis?

Answer The contraction of th [illegible] ill thro beside the tube as well as thro [illegible] If y reason to believe you have large clots there it is well to over distend the stomach first The tube then is used as an irritant and as a means to get other fluid in

Dr Burr—Why does the Doctor choose very warm water in preference to cold water, especially in pyrexia?

Answer I referred to warm water in cases of depression from the cholera infantum The hot water gives a better cleansing effect You may have, of course, elevation of the temperature, but in cholera infantum you have no especial elevation of temperature and sometimes you have an abnormally low temperature And certainly in those cases you would use the hot water But outside of that there is no special reason for using hot water

Question What temperature?

Answer I should use water about 110 degrees If I wanted an effect in the reduction of temperature, I should use it cooler than that

Dr Burr—I believe with Dr Bell that the irrigation of the stomach and colon is of the utmost importance in all these cases of malnutrition and indigestion, which are almost synonymous terms But I have found the application of cold water externally and internally to be far more stimulating than hot water I would use the cold water in colonic flushings because you can get up peristalsis better with it The peristalsis better empties the bowel, perhaps, than the flushing itself The peristaltic action brings matter away from far up the colon It is a question whether you often get these tubes above one of the flexures of the colon or rectum Now, if you have infantile convulsions, which are in a large majority of cases induced by indigestion and autoinfection and its explosive effects on the nerve centers, which are so unstable in infancy, then the cold water is doubly important I know nothing more irrational than what I find day after day of the method of plunging the child into a hot mustard bath and putting something on the abdomen, but neglecting the important feature of first emptying the colon The first step in my mind is a full cool bath if there is pyrexia, and pyrexia you will often find is the cause of the convulsions The over heated blood, of course, is another effect of the poison We have the poison first, pyrexia next and convulsions third, following the effects upon the nerve centers We should use the cold bath to reduce the temperature first, then the colonic flushing and then the stomach irrigation, and if we think there is something irritating left we should give a good old-fashioned dose of castor oil With the other process we may have convulsion after convulsion I have found sometimes the attending physician present, who has assured me the child has had bath after bath, and I would find the hot water there colored with mustard in evidence and still the convulsions continued Fifteen minutes after rational measures were used the child would be asleep

Dr J A Work—I asked Dr Bell the question about the emptying of the stomach because I believe the first thing we have to do as physicians in any of these acute cases is to remove the cause as soon as possible A physician, unless he studies to do that, is not worthy the name My friend has just given us a key note I have practiced that for twenty-seven years and am more confirmed every day in the belief that we are not to simply administer medicine, but we are to study the cause and remove it That is the reason I asked the question In these neurotic cases let us get back to the first cause, or as near as possible to the primary cause, of all the trouble When I am called to a case of acute irritation of the intestines or stomach with rise of temperature, I first ascertain how the child has been fed I then want to know about the elimination, because we know there are only four emunctories, or "sewers" *as I explain to the friends of the patient*, the bowels, skin, kidneys and lungs, and I inquire about all these "sewers," whether they are in proper condition or not If I find the bowels have not moved sufficiently recently, I first secure an evacuation of the bowels and then depend largely, as to what to do next, on what is the condition of the contents of bowels passed After the bowel is thoroughly cleansed I give the bath, not so much to reduce the temperature, but I have the patient given a washing with soap and water, for nine children out of ten need it at that juncture After they are washed thoroughly I have them put in a well ventilated room, and in almost every case the excitement is gone and the patient is calm, easy and on the road to recovery immediately

Now as to the use of the rectal tube I believe if we come to consider ourselves as an animal machine, that every thought and motion wears us out and that by reason of this we have to take food and drink, and in our younger days we are active and the activity causes increased circulation and activity of all the body, but as we grow older we are not as active and we need prompting of the elimination We notice the little boys and girls, say 10 years old, wear out about ten pairs of shoes to our one, which shows they are more active, and they do not have the same need of prompting of the elimination Some ask, if they begin the use of the enema or purgative, won't they have to use it all their life But, I ask them, hadn't they better use it all their lives than to be invalids all their lives I believe there are cases in which nothing else will do but to have elimination, either by the rectal tube or enema, every day, twice a day Here is a proposition I want to lay down, upon which I have practiced and which I have demonstrated The four emunctories I have mentioned must each do its work and we must not depend upon one to do the work of the other, but each must be allowed or caused to do its own work within the proper physiologic time

Dr H E Garrison, Dixon, Ill —There is one point brought out which I would like to notice, and that is the use of castor oil in cases of infantile convulsions I have experimented with it for a long time I had one boy whose diet I could not control and he would have convulsions now and then Sometimes he would go two months before a convulsion would occur I finally decided to give him Rochelle salts for I could not get him to take castor oil I gave the salts in lemonade whenever he became a little constipated Eight months have now passed without the child having a convulsion

Dr C W Foster, Deering, Me —I have been somewhat interested in these papers, but it seems to me the ideas expressed have been along lines of practice in which I am not specially interested It has been my experience usually, when I have been called, the child has had its fit or convulsion, and very rarely do I see a second or third one They usually remain quiet until I can get a movement of the bowels by a big dose of calomel or castor oil, and certainly I have seen or thought I have seen children that have been quieted and have gone along very nicely with that method It seems to quiet the nervous system very well In regard to the nursing of children, spoken of in Dr Burr's paper, in my region it is not so difficult to get healthy mothers to nurse their children, but the great difficulty arises often, I think, in urging the mother to nurse her child We have a great many women who are mothers who are not physically qualified and I do not believe such mothers are fit to nurse their children I believe it is often better to have the children fed with artificial food, cow's milk, than to have them nursed by these sickly, tuberculous women I am, myself, a sample of a cow fed baby, for I came from a tuberculous family One thing about cow's milk, overlooked by a good many, is the difference in the milk supply of large cities and small cities and villages I live in a small city and I believe the milk there is better when it is delivered than that milked last night or early this morning, twenty miles from the city, left at the depot, collected by milk men, mixed together in an ice chest and delivered to morrow morning I do not believe such milk is good when it is deliv ered That is one difficulty in feeding babies on cow's milk in the city I do not believe milk churned a mile is as bad as milk that has been churned five or ten miles In my early life I was on a railroad fifteen months I had one of these delightful gravel trains, where we had to have our meals on the train I found the milk at the first meal had become well buttered The stomach irrigation is delightful where it can be carried out In small cities or country, where the patient may be several miles away and we have to put up with the ordinary mother, nurse or help, it is very difficult to wash out the stomach every time the child is fed, or even to give it good rectal injections It seems to me the sytematic bathing, the use of warm and cold baths, can be carried on in hospitals and cities, where competent help is plentiful, but such treatment is hardly applicable where we can not get competent nurses

Dr E D CHESBRO, Providence, R I —One point in regard to infantile scorbutus is the shrinking, anxious expression, which was particularly interesting to me This particular symptom to which I have referred, was very striking This child developed no subperiosteal hemorrhage so far as I could see, but she had repeated attacks of epistaxis The Doctor referred to treatment effecting speedy cure, but perhaps the case he reported would have recovered just as quickly with a change of diet It is a question in my mind whether drugs exert very much influence in these cases

Dr A C COTTON, Chicago—We have had some talk on scurvy lately Last year Dr Love had something to say, and the year before something was said upon scurvy In illustrating a statement that he made, a medical friend of mine, in speaking of fads and the tendency to follow when anybody starts anything, said when anybody reads a paper everybody begins for the first time in his life to find he has a few cases of the same kind, rather intimating we are not all honest, and he used scurvy as an illustration I think it has struck every one here we hear a good deal more of scurvy than we used to and we see a good deal more of it than formerly There is a good reason for this The country is overrun with artificial foods, persistently advertised by the manufacturers and also by physicians, who ought to know better In some whole communities exclusive artificial baby feeding is adopted and the effect is seen in the development of scorbutic symptoms Formerly they used exclusive milk diet, and then they died of acute milk poisoning, but they did not have scurvy I think it is Kerr, writing upon milk, in his description says it contains living cells, aside from the proteid substances we have been in the habit of recognizing and dividing into lact albumin and caseinogen and these living cells are directly absorbed and used in the animal economy of the infant, but are destroyed by heat, even heat sufficient to Pasteurize it He also says, as we have heard before frequently, that the heat coagulates the albumin We all know that even when heated to 160 degrees, some of the lact albumin is coagulated and the emulsion is thicker than before Knowing these two facts, I do not think we should say we do not see why infants should not develop scorbutus or malnutrition on cooked food and not on raw food I do not know anything more interesting to me than the discussion Dr Burr brought out so well in his very concise paper

Now as to the point mentioned by Dr Burr and Dr Dixon If a woman were to come into your office and ask you to abort her, because it is a good deal of trouble and expense to have a baby and she does not want to undergo the responsibilities of maternity, I suppose about the first question you would ask her would be Who recommended you to come to me on this errand? That is my first question, because my curiosity is excited But it does not take long to disabuse her mind of her error in coming to you It is possible you may show her to the door a little frigidly Now why not show an attitude similar to that toward the woman who does not want to nurse her child? She may say she had trouble nursing her previous child, but why should we not take just as high ground concerning maternal feeding as we do in regard to this other crime? It is a crime to allow the mother to wean her baby, unless there is some thoroughly scientific reason for it Of course we do not want a tuberculous mother to nurse her child We have not paid enough attention to inducing the mother to produce a proper food for her baby We should make the mother a good milker by feeding her properly and taking care of her Rotch has said some good things in his book in regard to the management of lactation

It may be I lack the delicacy of touch in passing the tube, but I find in the majority of cases the sigmoid flexure is an insuperable obstacle It has been said, instead of doing as Dr Bell suggested, to pass the tube so *easily* right up to the transverse colon and then turn on the water, if you turn on the water while introducing the tube the introduction of the tube will be facilitated

Dr DANIEL H CUNNINGHAM, Chicago—As to passing rectal tubes, I have always used about a No 8 or 9 hard rubber catheter, turning on the water immediately upon entering the rectum and directing the catheter with the finger, and have been sometimes, not always, able to pass the sigmoid flexure

Dr BURR—The paper I presented on "Infantile Scorbutus," was intended to emphasize the fact that we have a great deal of incipient scorbutus which does not arrive at the point of characteristic appearances, so that it can not be recognized as scorbutus but only as a tendency toward it the child will eventually, perhaps become scorbutic unless attention is paid to change in its diet The question of feeding children in the city and in the country are two different questions Our city born, city fed and bred children labor under many disadvantages the country children know nothing about The majority of country mothers are far beyond the city mothers in the point of health When I say a child must be breast fed, I presuppose a healthy mother I would not advise breast feeding from a mother suffering from tuberculosis, syphilis, or other constitutional disease But I believe we should make the healthy mother feel she is a criminal if she denies the child nature's food, unless there are, as I stated in the paper, unsurmountable difficulties The question of getting pure milk in cities is one of the most difficult problems In our city we have found necessary a well enforced ordinance, fining milk men for furnishing bad milk, and every month some of them are brought up and fined As to the remarks of Dr Chesbro, about the expression of fear and timidity on the part of the child, I mentioned that in the paper What is the cause of the fear? The child dreads to be touched Why? Because its little joints are sore, perhaps there is hemorrhage already under the periosteum When you find that expression you should look out for scorbutus Let that be one of your early symptoms or warnings with reference to the condition of the child's nourishment Malnutrition is an omnibus word, in one child it may lead to rickets, one form of malnutrition, in another scorbutus, another form of malnutrition, in another to petit mal or epilepsy, in which the malnutrition gives expression in another way, in another it may predispose to tuberculosis Anything which lowers the power of vital resistance will lead into one of these numerous roads from health to invalidism I do not wish to emphasize the medical treatment of scorbutus Undoubtedly the orange juice, raw milk and meat would have worked a wonderful change in the child I did believe the calomel and guaiacol of value in the first few days With reference to what Dr Cotton said about fads, the diagnosis of the condition in this child was not a fad The child was under the care of a physician from eight until twelve months of age, before it was brought to Chicago A number of scars were found over the body, from the breaking down and formation of little abscesses in numerous places But while the commercial men are distributing more and more their chromo advertisements of artificial foods and the mothers get recommendations from their family, friends and neighbors, as well as from the press and even some physicians, scorbutus will continue to increase The tendency is a wrong one and we ought to call a halt with all the emphasis possible

As to colonic flushing, I have repeatedly found my rectal tube or one of these large catheters, which serves the purpose admirably, doubled up and extruded forcibly from the bowel It is often utterly impossible to pass it beyond the sigmoid flexure A little postural change may assist matters very much For instance, by having the hips elevated you may facilitate the accumulation of water in the colon and assist the peristalsis I prefer cool water, at 80 or 75 degrees

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A CASE OF CHLOROMA

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY S C AYRES, M D
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It is possible that the subject of chloroma is as new and rare to many of you as it was to me when the case I have to report came into my hands It only came into my service at the Ophthalmic Hospital because the neoplasm had invaded the orbits and produced a marked exophthalmus In the *American Journal of Medical Sciences* for August, 1893, appears a paper entitled "Chloroma and its Relation to Leukemia," by Dr George Dock, of Michigan, in which he reports a case He has examined the literature of all languages and collected, including his own, seventeen cases of chloroma

Edward Ludwig, aged 7, was admitted to the Ophthalmic Hospital May 18, 1893 His parents are living and in good health There are five other children in the family, all of whom are healthy

Previous history —He has always been a bright, intelligent boy and has never suffered from any serious illness He has had repeated attacks of parotitis (?) and the present trouble seems to have followed one of these attacks He at first complained of pain in both orbital regions and at the same time both eyes seemed to be more than usually prominent After a week or more, his mother noticed some impairment of his hearing, which slowly increased The exophthalmus increased more rapidly He became very weak and somewhat emaciated, and complained of a severe pain in the left foot, on account of which he was unable to walk

Upon his admission into the hospital both globes were very prominent, but the right more so than the left It was with difficulty that he could close the lids of the right eye over the ball The corneæ are clear and there is no impairment of vision The conjunctivæ of both eyes are red and chemotic The motility of the eyes is unimpaired In the upper and outer portion of the right orbit can be felt a dense, inelastic growth which protrudes beyond the edge of the bone A similar growth can also be felt in the left orbit, but not so pronounced The optic papillæ are somewhat pale, but there are no other alterations in the fundus of either eye His hearing is so much impaired that he has to be spoken to in a loud tone Pulse 120 per minute, temperature normal There is no lesion of any of the cranial nerves Muscular power and sensation of both upper and lower extremities normal Pressure on the sole of left foot produces pain, but there is no redness or swelling in this locality

May 21 The proptosis of the right eye has increased, but that of the left is apparently slightly less There has developed a swelling in both temporal regions They are rounded and elastic, without any sensation of fluctuation

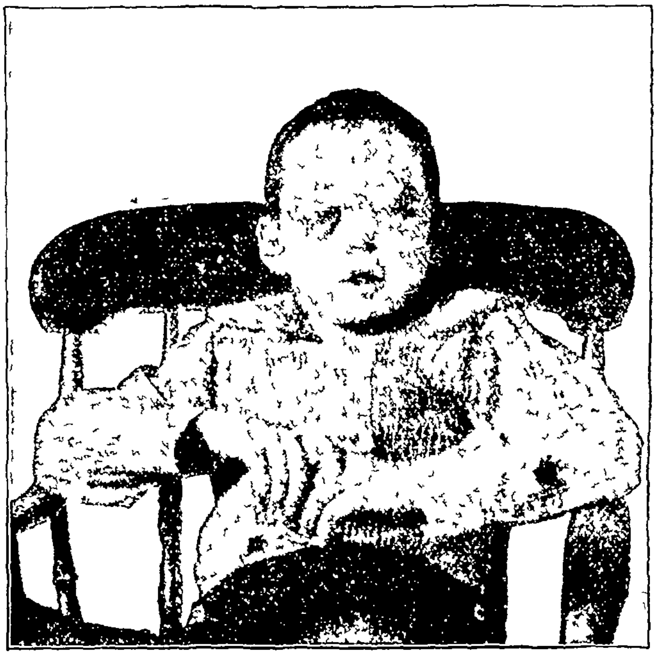
May 23 Protrusion of both eyes increased, corneæ hazy and covered with inspissated mucus

May 27 Temperature normal, pulse 120 Patient complains of some difficulty of micturition, later on, retention of urine Both corneæ are quite opaque The swellings in the temporal regions more pronounced There has developed a hard, firm swelling in the region of each parotid gland Intelligence good, hearing somewhat improved Pain in foot still present No appetite The exophthalmus of both eyes increases day by day Both globes are now forced beyond the palpebral fissure

June 2 Condition worse in all respects He has had a severe hemorrhage from the conjunctiva of the right eye

June 5 Died this morning as result of hemorrhage from the conjunctiva of the right eye

Three days before death, blood pale and watery Staining according to the Ehrlich method showed a marked increase in the number of white blood corpuscles, the increase being due principally to the number of multinuclear cells, while the small lymphocytes and those white cells characteristic of splenic and myelogenic leukemia are not increased Eosinophile cells are sparingly present, not above 2 per cent The examination of the blood at this time justifies the diagnosis of leucocytosis only, and not leukemia Furthermore, an examination of the patient revealed no enlargement of the lymphatic glands except those of the neck



The postmortem examination was made about twenty-four hours after death Body fairly well developed and nourished, postmortem rigidity well marked, the upper and lower extremities normal No evidence of subcutaneous hemorrhages Marked swelling of the lymphatic glands about the neck Both eyeballs protrude to such an extent that they are only partly covered by the eyelids, sloughing of both corneæ Traces of blood about the eyes, mouth and nose Mucous membrane of mouth swollen, teeth covered with blood To the touch the lymphatic glands are firm and resisting, with no sign of fluctuation A small nodular infiltration over the right parietal bone near the median line On cutting through this swelling it was found to be situated beneath the periosteum, and although there was no evidence of its having arisen from the bone, the latter was at this point remarkably thin No trace of inflammation or infiltration of the pia mater or the brain The brain was found to be intensely anemic On removing the brain the orbital plates were seen to bulge upward owing to the pressure from within After removing the very thin orbital plates, both cavities were found filled with a firm, solid and somewhat elastic mass of a light greenish color, which pushed the eyeball forward This mass was removed with some difficulty although only at one point did it seem to be firmly adherent to the periosteum lining the orbital cavity Here the bone was somewhat eroded Behind, the new growth extended to the sphenoidal fissure, surrounding but not involving the optic nerve In front and above, the newly formed tissue extended to and a little beyond the orbital arch On superficial examination the new growth seemed to be confined to the orbital cavities, a further examination showed this not to be the case, for the cancellous tissue of the sphenoid and the petrous portion of the temporal bones were softened and infiltrated with a dirty greenish-yellow fluid, looking very much like pus On the left side in the petrous portion of the temporal bone was an area in which the bone tissue was completely destroyed and filled up with a material such as was found in the orbits, differing from it only by being of a more dirty greenish-yellow color and not quite so firm The lymphatic glands presented the same appearance in section as did the tumors of the orbits

Equally as interesting proved the further examination of the new growth On having placed the tumor in alcohol, the color disappeared entirely within twelve hours On the other hand, the specimen kept within a tightly corked bottle, still retains the greenish color, in fact, the color has become even more marked Some of the fresh fluid taken from the interior of the sphenoid bone was examined, but revealed only the presence of large numbers of small corpuscles, fat globules and granular detritus

The section of the tumor after being hardened in alcohol and ether seemed to justify the diagnosis of sarcoma, the cells being almost entirely of the small round variety, none or very few spindle cells, and remarkably little intercellular substance, no large blood vessels, but numerous lymph spaces Furthermore, the small round celled infiltration extended into the upper eyelid down to the yellow elastic cartilage

The seat of the tumor, the peculiar color, the history of the growth, the remarkable involvement of the lymphatic glands, the results of the microscopic examination, make this case one of a few that have been put on record under the head of chloroma cancer vert, the green cancer of the French

Whether the form of tumor should be called a sarcoma, whether it is of the so-called connective tissue variety, or on the other hand, as Dock would seem to believe, a peculiar condition arising in the course of true leukemia, the tumors being regarded in this case as lymphomata—these are questions which the future must decide Dock and a number of others have found by an examination of the blood that they were contending with true leukemia My examination of the blood, as already described, showed a remarkable increase of white blood corpuscles, but they were indicative only of a marked leucocytosis, and not a true leukemia This examination was made three days before death However, there is still a great deal of obscurity about leukemia as to its true nature, and when we consider that some writers have suggested the name of sarcoma of the blood for this disease, we can not wonder that in the case of chloroma the pathologic conditions found were suggestive of leukemia

I am greatly indebted to Dr Greiwe for the above report of the postmortem and of his microscopic examination of the growths His views, while they may differ from other investigators', are founded on examinations made of the neoplasm removed from different localities It is very unfortunate that the portmortem did not include the thoracic and abdominal cavities A more complete examination might have thrown some light on the tissues invaded by this strange disease

In all the prominent diagnostic points my case seems to correspond with the one reported by Dr Dock, as well as most of those he has so carefully collected

Color —In color it was a yellowish-green, or perhaps a pea green It did not vary much in the different localities, but was more pronounced in the larger masses

Consistency —This differed in different localities It was homogeneous and without fibrous septa I have described the cut masses as presenting a smooth, shining, jelly-like appearance

Involvement of periosteum and bone —Most of the cases show involvement of the periosteum, and in this case it was marked, but more than this an actual softening of the bone Dr Greiwe in his report says that "the cancellous tissue of the sphenoid and the petrous portion of the temporal bones were softened and infiltrated with a dirty greenish-yellow fluid, looking very much like pus" On the left side in the petrous portion of the temporal bone was an area in which bone tissue was completely destroyed and filled up with a material such as was found in the orbits differing from it only by being of a more dirty greenish-yellow color, and not quite so firm

Duration —From the report of the mother it seems that she noticed the exophthalmus only four weeks before she brought him to the hospital He died in two weeks after he was first seen Allowing two weeks to elapse in which the changes were not detected by the parents, the disease ran its course in the short period of two months After he was first seen the growth was exceedingly rapid and could be noticed day by day

Hemorrhage —Epistaxis is mentioned as occurring in some of the cases of chloroma reported In Ludwig's case there was severe hemorrhage from the conjunctiva of the right eye This occurred in my patient the day before he died, and then on the following day recurred with such violence as to destroy his life

Retina —The eyes were carefully examined and no swelling of the optic discs and no retinitis was found The discs were pale and anemic, but not atrophied His vision was good In a short time the cornea became so involved that further inspection of the fundus was impossible

Exophthalmus —This was pronounced and was the first symptom that attracted the attention of his parents The engraving shows his appearance a day or two after he was first seen It was made from a photograph taken by Dr Arch Carson, to whom I am indebted for his interest in the case The exophthalmus increased slowly in both eyes, but more in the right, and in a week from the time he was first seen the proptosis was so great that he could not close the eyelids, and in consequence the cornea ulcerated

Exciting causes —There is no known exciting cause in this case, but his illness followed an attack of parotitis His mother said he had had several attacks of so-called parotitis It is not probable that these attacks were true mumps, but precursors of the development of the disease

Deafness —Deafness was a marked feature varied slightly in severity from day to day, and it was always necessary to speak to him in a loud tone He had no catarrh and there was no otorrhea The drum membranes were not examined

Dr Dock says "From what we do know of the natural history of leukemia and of chloroma we can see the analogies of the diseases We can say that chloroma is a lymphomatous process similar in its clinical features to leukemia and pseudo-leukemia Our ignorance of its precise relations depend partly on the fact that our knowledge of chloroma is very incomplete, partly on the indefinite nature of leukemia and pseudo-leukemia "

OBSCURE CASES OF OPTIC NERVE ATROPHY OF CEREBRAL ORIGIN

Read before the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY CHARLES W KOLLOCK, M D

CHARLESTON, S C

Affections of the brain proper that might cause atrophy of the optic nerve are very numerous, but in a majority of cases the disease which produces the optic neuritis causes the death of the patient before atrophy takes place, or can be recognized by the aid of the ophthalmoscope The cases who can survive the disease sufficiently long for the nerve to become atrophied are usually too obscure in many instances for human ingenuity to explain and though the neurologists of to-day are wonderfully accurate in their knowledge of this complex organ—the brain —still in very many cases their conclusions must be purely problematical When we remember that a tumor growing in the brain tissue may produce optic neuritis in one case, and in another death may occur without an eye symptom having been seen, we may readily understand the difficulties of accurate diagnosis

Lesions at the base of the brain will be followed by characteristic symptoms according to the parts involved and compressed, but it does not follow that atrophy will occur merely because there happens to be a growth, an aneurysm, or even a thickening of the meninges at this locality Meningitis, when not fatal, often involves the optic nerve and its sheaths and atrophy gradually supervenes, but such cases are not obscure The history will often give a thorough insight as to the cause of the consequent atrophy

Lesions of the corpora quadrigemina are rare, and cause blindness, loss of pupil reflex, strabismus and nystagmus when the anterior pair, and loss of coördination when the posterior pair are effected But both pairs usually become involved and when a defective action of the same branches of the oculomotor nerves on both sides is seen it is more characteristic of quadrigeminal disease than is neuritis, choked disk, or atrophy

Atrophy from anemia is more common after severe hemorrhage rather than from inanition Von Graefe usually found atrophy coming on some time after hemorrhage took place and Schweigger says, that the loss of blood and disease of the optic nerve are wholly unexplained and can not be due to simple anemia Jaeger has described atrophy of the optic nerve that follows hemorrhage Soon after the hemorrhage occurs the vision becomes indistinct, it may improve or become worse according to the nutrition of the patient, but after repeated hemorrhages amblyopia increases and vision is lost The disk is pale and bluish in appearance, the sclerotic band is broad, and the remainder of the eye ground is very pale and the vessels smaller than normal Fries says that 35 per cent are due to hemorrhage of the stomach and intestines, 25 per cent uterine, 25 per cent from abstraction of blood, 7 3 per cent due to epistaxis, 5 2 per cent to bleeding wounds and 1 per cent to hemoptysis and urethral hemorrhage Tumors pressing upon the cerebral blood vessels and anything that interferes with the circulation in the brain may cause atrophy of the optic nerve, but it is more than propable that death would occur before the atrophy became apparent

Embolism occurs generally in young persons and is caused usually by a diseased condition of the heart valves, rarely from thrombosis of the veins of the lower limbs, and still more rarely from myocarditis, that causes a rupture of the endocardium It may also be caused by an atheromatous degeneration of the inner coats of the aorta, and form gangrenous or other processes in the lungs, by tumors that press upon and produce inflammation, and finally form wounds The middle cerebral artery is most often plugged, which does not immediately produce atrophy but more likely a softening of the brain that may eventually involve the optic nerve and cause atrophy

Thrombosis comes from atheromatous degeneration of vessels and is more frequent after middle life There are generally prodromal symptoms and it is at times very difficult to distinguish between this lesion and cerebral hemorrhage, but recovery rarely takes place after the former The mental powers gradually fail and the patient finally becomes demented Atrophy is rare from this lesion

Cerebral aneurysm —Optic neuritis is uncommon after this lesion and therefore atrophy is also rare, except perhaps in some cases where there may be direct pressure upon the optic nerves or chiasma Optic neuritis has been occasionally seen when there was an aneurysm of the internal carotid and was then double Loss of sight in one eye, sometimes extending to the other, with, or especially without, optic neuritis, with or without loss of smell on the side affected, occurs in aneurysm of the internal carotid or anterior cerebral artery, and the distinction between the two depends on the presence or absence of paralysis of the other nerves of the eye ball first affected which occurs especially when the aneurysm is of the internal carotid Cerebral aneurysms occur usually between the ages of 10 and 60, rarely before or after, and as often before 40 as after, and more frequently in males than females

Cerebral abscess occasionally causes optic nerve atrophy by extension of the inflammation to the nerve or its involvment by the consequent softening of the tissues Abscess of the brain is generally due to injury or suppurative inflammation and is more common among males than females 42 5 per cent are caused by ear disease, 24 per cent by injury and the remainder are due to diseases of the nose, orbit, non traumatic causes and tumors It occurs in males and females in the proportion of 3 to 1 1 to 9 years, 24 cases, 10 to 19 years 48 cases, 20 to 29 years, 72 cases 30 to 39 years, 29 cases, 40 to 49 years, 26 cases 50 to 59 years, 16 cases, 60 to 69 years, 7 cases, 70 and over, 1 case

Optic neuritis is less common than in tumor Location does not affect the neuritis and loss of sight is probably due to neuritis as vision is rarely affected by the abscess itself

Multiple sclerosis occurs at all ages but more frequently in the first half of adult life, between the ages of 20 and 30 years It may affect any portion of the brain, hence the symptoms vary The cranial nerves are often affected, especially the first, second, third, fifth and seventh Loss of muscular control is a common and early symptom, movements are peculiar and jerky but cease when the parts are at rest Nystagmus is very common The "eye symptoms are frequent and important The optic nerve may suffer in various ways There may be impairment of sight in one eye or both, often with an irregular contraction in the field of vision, and without at first any visible changes in the optic nerve to account for it This condition depends upon the development of an islet of sclerosis in one or both optic nerves, or in the chiasma It may progress almost to complete blindness of one eye After a time secondary atrophy supervenes, and can be seen with the ophthalmoscope, occasionally the atrophy is preceded by slight neuritis, when sclerosis is near the eye ball In some cases again there is a primary atrophy of the optic nerves, exactly like that which occurs in tabes, with a similar failure of sight, proportioned to the visible alteration in the nerve Both eyes usually suffer, but one is often affected earlier than the other This complication is, according to my own experience, rather more frequent than the form first described, and is of much pathologic interest " There is at times loss of accommodation, less frequently light reflex and the pupils may be unequally dilated

Bulbar paralysis or labio-glosso-pharyngeal paralysis occurs generally in the second half of life and in males oftener than females The causes are obscure, sometimes mental depression and anxiety, exposure to cold, debilitating influences and injuries, as blows upon the back of the neck Optic nerve atrophy is of rare occurrence in this disease and of course when it occurs the symptoms of the disease would be a guide in diagnosis

Paralysis of the insane; general paralysis —Vision is frequently affected by this disease, the ophthalmoscope showing choked disk or consecutive atrophy according to the stage of the affection General paralysis is a disease of the well-to do, the rich rather than the poor, and occurs generally among those who live a busy, hurrying life rather than among those who reside in rural districts and lead quiet lives It is often seen in the highly educated, in males oftener than females and about the prime of life Hot climates, certain pursuits and excessive sexual indulgence are known to be exciting causes Child-bearing and over indulgence in alcoholic liquors may also be a cause It frequently follows or is associated with locomotor ataxia The symptoms of this disease are so well known that it should not be difficult to diagnose the cause of the optic nerve atrophy In addition to the general symptoms there may be at times dilatation of the pupils myosis usually occurring at an early stage, but a difference in the size of the pupils is still more definite The "Argyll-Robertson pupil' is often seen, these symptoms usually occur in other diseases of the brain and are chiefly valuable as indicating central disease The cause of this disease is "a progressive degeneration of the encephalo spinal nervous system attended by subacute inflammatory changes in the membranes of the brain and cord' Atrophy of the optic nerve in this disease may be distinguished from that caused by tumor of the brain, syphilis of the brain, etc , by the absence of the symptoms that indicate those lesions and especially from the latter by the failure to get improvement by the use of mercury and iodid of potassium Treatment is of no avail in this form of atrophy

Brain tumors cause diffused symptoms, headache, vertigo, vomiting, general epileptiform convulsions, apoplectiform attacks, psychic disturbances and choked disk Choked disk is found more frequently (54 per cent) in cases when the tumor involves the corpora quadrigemina Direct pressure on the optic tract causes atrophy, at times, without choked disk Tremors and localized spasms are valuable diagnostic signs, because, first, they are more frequent with tumors than other lesions, and second, they are more frequent in the cortex, third, more frequent in the motor zones In more than one-third of all cases localized spasms and contractions exist at some time during the disease and when present they indicate localization in the cortex oftener than elsewhere, next the corpus striatum and optic thalamus Paralysis is gradual and distinguishes it from hemorrhage Tumors of the corpora striata, corpora quadrigemina and lenticular nuclei cause hemiplegias more slowly than hemorrhage Disturbances of vision are very frequent as symptoms of brain tumor 1, atrophy of optic nerve following choked disk, 2, deviation of the eye ball or eye lids from isolated or combined paralysis of the nerves supplying the ocular muscles, the third, sixth and seventh, 3, amblyopia, or amaurosis, resulting from direct affection of the optic nerve in its course through the cranium, or at its cerebral centers, the mode of development being, therefore, almost precisely analogous to that of paralysis of any of the nervous tracts by direct compression The optic chiasma or nerve is liable to pressure from tumors arising from the base of the cranium or from the hypophysis, and also from the peduncles Hemiopia is produced when one tract or one side of the chiasma is compressed Tumors of the thalamus do not often cause blindness Tumors of the corpora quadrigemina have a much larger percentage of blindness than those of any other part and those of the cerebellum come next

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THE DIFFERENTIAL DIAGNOSIS BETWEEN SIMPLE GLAUCOMA AND OPTIC NERVE ATROPHY

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5 8 1896

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At first thought little difficulty would seem to present itself in differentiating simple glaucoma from optic atrophy, and in the majority of cases any careful student ought to succeed A table can easily be constructed, giving the typical like and unlike symptoms with such clearness of "deadly parallel columns" as to make the tyro sure that only a blockhead could err Yet some or all of our differentiating signs are at times lacking or doubtful, anomalous or casual complications are encountered, and experience teaches that the best-posted observers are tri times to the uttermost by the uncertainties of some cases And when a case passes from one to another with varying diagnosis, the later student will do well to temper his self-gratulations by remembering that the cardinal symptoms may have been wholly masked before, and better fortune rather than superior skill has given him the advantage

It behooves us, therefore, to study out, with all care, every detail, even in cases that appear perfectly clear, for most of us have had patients in whom at one time no trace of glaucoma has been detected, while shortly afterward they have presented themselves with so marked a stage of the affection as to convince us that exhaustive study ought earlier to have recognized it I shall not soon forget two ladies sent me, about the same time, by one physician, each of whom had full development of glaucoma in the left eye when they returned two years later One had rainbow vision, that made my study exhaustive, though vain for other symptoms, the other had no suggestions of it Both were irretrievably neglected, when seen again Such cases passing into other hands must arouse doubts of the competency of the earlier adviser, unless there is full and frank communication with him On the other hand, optic atrophy may strongly suggest glaucoma and lead to a tentative or positive suggestion of iridectomy which the subsequent history shows to have been groundless

In simple glaucoma and optic atrophy we may usually find the contrasted symptoms of the following table, but it must never be forgotten that they may be wholly absent, or obscured if present

TABULATION OF SYMPTOMS

Simple Glaucoma	Optic Nerve Atrophy
Tension increased	Normal
Cornea hazy and anesthetic	Normal
Anterior chamber shallow or obliterated	Normal
Iris atrophic and discolored	Normal
Pupil dilated and sluggish or fixed	Small or dilated (Robertson)
Reflex yellowish green, "glaucous"	Normal
Perforating vessels dilated and tortuous	Normal
History of pain and obscurations	Painless loss
Unilateral character usual at first	Bilateral generally
Limitation of field usually to nasal side	Concentric limitation
Color fields commensurate to form fields	Disproportionate loss
Rainbow vision about lights	No halos
Knee jerks unaffected	Often lowered or lost
Optic disc cupped, margins overhanging	Dished, margins shelving
Halo of choroidal atrophy usual	Halo rarer
Nerve tissue greenish in shadow	Nerve bluish gray
Arteries and veins pulsating	Arterial pulsation rare

The cardinal symptom of increased tension is variable and often uncertain Hardly any two observers will exactly agree as to the tension of an eye, and a rigid sclera, a tense eyelid or a rude touch may easily cause error Palpation had better be done with the index fingers of both hands applied to one eye at a time and then transferred to the other for comparison In doubtful cases it may be done upon the uncovered sclera, but it is usually better to have the patient look very far down and palpate above the tarsal cartilage If there are intermissions in the symptoms, we may expect to find corresponding falls of the tension to the normal With a shrinking patient the surgeon must be gentle and not over-endowed with thumbs The superficial corneal haze, which gives it a slight "pin-stuck" appearance like ground-glass or a mirror that has been breathed upon, may be a very delicate change and, like the anesthesia, demand close observation to detect it It is doubtless due to edema of the epithelium and pressure upon the nerves Though most marked near the pole, it is nearly uniform, in contrast to more localized keratitic changes Individual differences in the depth of the anterior chamber, with a tendency to shallow with advance of life, must be taken into account, and the pressing forward of the lens is not usually very marked, but the appearance of the iris is usually quite characteristic Altered color, vague detail of the surface or irregularities of structure and a general suggestion of atrophy are rarely lacking, and can easily raise a question as to iritis present or past, by the peculiarity of some of the changes So too the pupil, semi-dilated and fixed as a rule, oval oftener than round, at best sluggish and imperfect in action — it is generally more abnormal in even the beginning of glaucoma than it becomes in any but the last stages of optic atrophy The peculiarities of action to accommodative stimulus but not to light, which Argyll-Robertson pointed out, the hemianopic reflex of Wernicke, the consensual action of an iris otherwise immobile, are rare in any glaucomatous phase, and may be determinate of the character of the nerve degeneration which we generally have to diagnosticate largely on negative data, by exclusion The yellowish-green reflex, often seen in the pupil of the glaucomatous eye, may have some counterpart in the opalescent haze of the lens in the patient with atrophic nerves, who is usually well advanced in life and has more or less arcus senilis and other diminutions of the transparency of his media Yet it joins in the formation of the external picture of glaucoma which the skilled observer can often recognize at a glance, although analysis of its details shows each of them so vague as to bring doubt as to its real existence Rarely lacking, however, to complete the picture and demonstrate the congestion of the ciliary vessels is the turgid, dark fullness of the perforating veins as they emerge from the sclera, several millimeters back from the cornea and meander beneath the conjunctiva Many conditions of ciliary congestion are marked by the undue prominence of these vessels, but in none of the active conditions are they as marked as they usually are in simple glaucoma Other injection of the anterior segment, such as may be great in the acute and subacute glaucomatous attacks, may be wholly lacking in all phases of simple glaucoma, and yet the observer will hardly fail to receive an impression of congestion, out of proportion to the expanse of these vessels

The history ought to help the diagnosis greatly, by the statement of pain in the eye, hemicrania or "neuralgia," coincident with the periods of obscuration and heralded by rainbows around the light Both affections are likely to be bilateral, but in optic atrophy the second eye follows but little behind the other in its decline whereas years may intervene before the glaucoma that has blinded one eye manifests itself in the other

Mensuration of the visual field should never be neglected, and although its showings are never to be accepted as pathognomonic, much can generally be learned from the charts thus obtained Color-vision is generally much lowered in optic atrophy, red and green even wholly lost or presenting very restricted areas of perception, with scotoma regions, where the recognition is weak, if not quite lost The form-field is more commonly restricted uniformly in the spinal and some of the cerebral cases, although hemianopsia and quadrant defects are not unusual, and may be very helpful in localization of the underlying lesions In glaucoma the general form-field suffers proportionately more and may be narrowed down, more especially on the nasal side until mere central vision remains, and the patient "sees as through a gun barrel"

The knee jerks and other tendon and muscle reflexes are well worthy of careful study in a number of our eye cases, but especially in any where plantar numbness, lancinating pains in the extremities and imperfect station or coördination suggest spinal disease None of these defects are to be expected in glaucomatous conditions, although it is not impossible to have glaucoma attack an individual giving such evidences of lesion of the cerebro-spinal axis

It is to the ophthalmoscope especially that we turn, however, for our diagnosis in many of these uncertain cases Here the picture may be unmistakable, when much was doubtful in all other directions Yet we can be over-confident as to its help, and find a picture that is almost typical of glaucoma when none is present, or that gives no confirmation to a diagnosis that is unmistakable in spite of such negative findings It is easy to make a set of diagrams, as does Fuchs, to define the difference between physiologic, atrophic and pressure excavation of the nerve head, but in fact we may meet combinations or transpositions of such appearances Jaeger's admirable atlas gives us some of the puzzling findings, while others have probably never been reported The total cup, with overhanging edge and greenish shadow, may seem typically present in cases with normal fields and perfect central vision, and we look again in a vain effort to see where healthy nerve fibers can find a place at the margin of such a disc So, on the contrary, we may find not only acute, but chronic glaucomas, in which neither the ophthalmoscope nor even anatomic study later, under the microscope, can demonstrate superficial cupping nor underlying depression of the lamina cribrosa Most trying is such an inconclusive or contradictory finding in such cases where one eye has already been lost by unmistakable glaucoma, and the other is affected, but with a condition too little defined to make us positive in deciding either for or against iridectomy

NOTE —Numerous original illustrations of the typical and the contradictory appearances of eye grounds, fields and anatomic sections were thrown upon the screen with the stereopticon

SPONGE GRAFTING IN THE ORBIT FOR SUPPORT OF ARTIFICIAL EYE

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY E OLIVER BELT, M D

WASHINGTON D C

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To a skilled oculist the ordinary enucleation of an eyeball is one of the simplest operations he is called upon to perform, and yet there are some cases in which so much of the conjunctiva is destroyed by careless or ignorant operators, that it is impossible for an artificial eye to be worn afterward This is very annoying to a patient, and we can not blame him if he never forgives the doctor who has so afflicted him Such cases emphasize the fact that it is the duty of the surgeon not only to operate skillfully for the immediate relief desired, but he should do everything in his power to prevent disfigurement, and when an organ or limb can not be restored to usefulness, he should at least obtain the best cosmetic results possible After an eyeball has been removed and an artificial eye inserted, very frequently it is not as prominent as the natural eye It has a sunken appearance which attracts attention, at once, to the fact that the eye is artificial To remedy this defect has been a problem for ophthalmologists for years

One of the most satisfactory operations heretofore practiced is that known as Mule's operation, which consists in the evisceration of the contents of the eye, and the insertion of a hollow glass globe in the sclerotic This is sewed in, and proves fairly satisfactory, but there is some danger of the globe being broken, and occasionally the stitches come out and the globe escapes There is also the risk of sympathetic ophthalmia, where the entire eyeball is not removed To obviate these difficulties and at the same time secure a full orbit, I have devised a method of sponge grafting which seems to meet the requirements without the disadvantages of other methods

The operation is a simple one and is performed as follows The eyeball is removed by the ordinary method under strict asepsis After all hemorrhage is arrested the socket is washed out with a formalin solution, 1 to 1,000, followed by sterilized salt solution A globe of fine, soft sponge, about three-fourths the size of the eyeball, previously sterilized in 5 per cent formalin solution and rinsed in the salt solution, is then inserted into the socket, or capsule of Tenon The conjunctiva is brought together and sewed with rat-tail sutures The eyelids are then closed with compress and bandage In a few weeks the sponge is filled with new tissue, which in time becomes firm, solid flesh, making a full orbit and a fine support for the artificial eye The sponge fibers are apparently absorbed

I have performed this operation in five cases with fairly good results in all, but union of the conjunctiva has not been firm enough to prevent some of the stitches from breaking or cutting out and the wound gaping In future cases, to relieve this strain on the conjunctiva and to obtain good motion of the eye, I think of uniting the opposing recti muscles with rat-tail sutures, and then the conjunctiva over that by the purse string or subcutaneous suture By this method we should get union by first intention, good motion of the stump and a full orbit There seems to be no danger from infection of the sponge, for in two cases the eye was removed for panophthalmitis Not only has this operation advantages over other methods [illegible] recent cases, but in old cases in which the eye [illegible] removed months or years ago, where there is [illegible] sunken appearance of the artificial eye, the [illegible] might be reopened and a sponge inserted

Since making my investigation, I find that [illegible] J Hamilton of Edinburgh practiced spong[illegible] for old ulcers in 1880, since which time [illegible] physicians have tried it in fresh wounds [illegible] other similar conditions that skin graft[illegible] used in However, I can not find in [illegible] literature in the library of the Sur[illegible] office any mention of sponge being [illegible] suggested and tried,

Case 1 —E L, colored, aged

Hospital in the spring of 1895, suffering from a ruptured eye ball (from a blow). Sight was entirely destroyed, and as the injury extended entirely across the cornea and through the ciliary region I advised removal of the eyeball, to which she consented. As she was willing to stay in the hospital as long as necessary and I could keep her under observation, I decided to try the insertion of a small sponge in the socket, with the hope that new tissue might form through it, as was reported to have occurred with a sponge accidentally left in the body during an operation. Accordingly, after removal of the eye, a globe of fine sponge was inserted and sewed in the socket. The sponge had been sterilized by boiling. After a few days the stitches came away and the sponge was exposed; however, there was no tendency for it to come out. There was considerable discharge and the orbit and sponge were cleansed as frequently as required. In two or three weeks about half of the sponge separated and came away. I found the remaining portion filled with new tissue and presenting a healthy granulating surface. The patient left the hospital soon after and was not seen again until a few days ago when I found a moderately well filled orbit, the wound was entirely closed and appeared to be covered with conjunctiva.

Case 2.—April 7, 1896. A. B., right eye ruptured (eight days previously by blow) through cornea and ciliary region. Eye full of pus. Enucleated under anesthesia, socket cleansed with formalin solution, 1 to 1,000. Sponge (sterilized with 5 per cent. formalin solution) inserted and stitched in with silk sutures. April 15, sutures out, wound gaping and sponge showing full length of fissure. May 5 about half of the sponge separated and came away, the balance filled with new tissue. June 3, socket full of new tissue and wound closed. Artificial eye inserted, has good motion and no sunken appearance of orbit.

Case 3.—April 13. C. T., aged 30, eye lost seven years ago. Eyeball shrunken. Eye removed under anesthesia. Socket cleansed with formalin solution, 1 to 1,000. Sponge inserted and stitched in with rat tail sutures. April 28, temperature normal all of the time. No suppuration. Wound healed by first intention. Smooth stump. April 30, one or two stitches out, sponge showing for one fourth inch, but seems to be filled with new tissue. June 3, wearing artificial eye. Orbit full, has not a sunken appearance, and motion of eye good.

Case 4.—April 23. A. J., aged 30. Stuck fork in left eye one week ago. Panophthalmitis. Eye enucleated under anesthesia. Socket washed with formalin solution, 1 to 1,000. Sponge inserted and stitched in with catgut and rat-tail sutures. April 30, some stitches out and sponge showing. May 5, fissure closed again with rat tail sutures. May 7, all stitches out again. June 3, wound gaping and sponge showing, but adherent all around and new tissue filling three fourths of sponge.

Case 5.—April 25. M. B., aged 30. Right eye lost by purulent ophthalmia several months ago. Eye enucleated under anesthesia. Socket cleansed with formalin solution, 1 to 1,000. Sponge inserted as usual and rat-tail sutures used. May 5, doing well, but some stitches out. June 3, nearly the entire sponge is filled with new tissue and the wound closing up.

A CASE OF TOTAL BLINDNESS, POSSIBLY DUE TO AN OVERDOSE OF QUININ.

Read in the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY H. BERT ELLIS, B.A., M.D.
LOS ANGELES, CAL.

August 8, 1895, I was called to J. W., a man 34 years old. After repeated questioning of the patient and his sister, the following disconnected, incomplete and probably somewhat inaccurate history was elicited.

The young man was an accountant in the employ of one of the Texas railroads and had been with them for years although for some time he had been an opium, whisky and tobacco habitué. The first habit he had contracted as a result of the use of opium during an attack of dysentery. Four years ago, he had gone to an institute and had been cured of these habits, but quickly lapsed into them again, excepting that he never renewed the use of tobacco.

I was unable to find out definitely the amount of morphin and whisky that he used daily. His own statement was to the effect that he had been taking about 7 grains of morphin daily. This statement was probably inaccurate, for judging from the amount it was necessary to give to keep him reasonably quiet, at the time I was called, he certainly could not have been taking less than from 10 to 20 grains in the twenty-four hours, and probably more for some months, and of whisky he used from one pint to one quart daily.

In October, 1894, when suffering from malaria, he had been given by a physician 120 grains of quinin in twenty-four hours in four doses. In a very short time he was totally blind in both eyes, but this condition lasted only about two weeks, after which there was a gradual return of vision, so that he resumed work on his books, and was able to continue at intervals by aid of an assistant (for his vision never became good) till February, 1895, since which time he had not been able to see anything, except to distinguish a bright light occasionally. There was no history of concurrent deafness.

During June and July he had been living with a woman who was an opium habitué and she had kept him constantly saturated with morphin, till his sister brought him to Los Angeles.

The patient, five feet, nine or ten inches tall, was extremely emaciated, weighing about 103 pounds, his normal weight had been from 145 to 150. He had the marked opium cachexia and puffiness of lower lids. There was almost complete loss of the cutaneous and deep reflexes the knee jerk being entirely absent. The bowels were sluggish, and the urine very scanty, ten to twelve ounces in twenty-four hours. He was practically demented, his memory so defective that he could not sustain a conversation.

The pupils were so small that it was quite impossible, in his helpless condition, to make a satisfactory ophthalmoscopic examination, without producing mydriasis, which I did with a weak solution of sulphate of atropin, and found the fundi presenting very small deviations from the normal. Both nerves were pallid and the arteries and veins, though relatively normal, were both slightly reduced in size, no other changes could be detected.

The morphin was gradually diminished and codein substituted, the whisky slowly reduced, so that by November 1, he was taking no morphin or whisky.

At different times, trional in 15 grain doses, chloralamid 30 grains, chloral and bromids 20 and 30 grains, and hyoscyamin 1-30 grain were given to quiet him. Sulphate of strychnin was administered, in gradually increased doses from 1-60 to ⅓ grain three times daily, hypodermically, in the temples. The knee jerk and other reflexes returned. Occasionally he would describe quite accurately some object in the room, but these returns of vision were very transient. His intellect improved materially, as did also his physical condition. About November 1, he had two quite marked convulsions, and we decreased the strychnin. The patient died late in December, of bronchitis and edema of the lungs, a condition not unlike senile bronchitis.

Was this a case of toxic amblyopia? and if so, was it due to quinin, morphin or whisky?

NOW is the time to increase the membership in the ASSOCIATION. Let every member send in one or more new names.

THE MEDICAL TREATMENT OF INEBRIETY

Read before the New York State Medical Society at New York City
Oct 15 1896

BY T D CROTHERS, M D
SUPERINTENDENT WALNUT LODGE HARTFORD, CONN

Inebriety is a more complex disease than insanity Its progressive degeneration often dates back to ancestors, to defects of growth, retarded development and early physical and psychic injuries Later, the poison of alcohol, by its anesthetic and paralyzing action, develops more complex states of degeneration, the form and direction of which is very largely dependent on conditions of living and surroundings

The psychic symptoms show progressive disease of the higher brain centers, both masked and open, with degrees of palsy and lowered vitality In insanity many definite pathologic conditions are traceable In inebriety a wider, more complex range of causes appear, the line of march of which is often traceable in more general laws of dissolution Its medical treatment must be based on some clear idea of what inebriety is, and the conditions present in the case to be treated This requires a careful clinical study of the symptoms, tracing them back to causes, and all the varied conditions formative in the progress of the case In such a study, heredity appears as the most frequent early predisposing cause The question then is What conditions of life have been most active in developing these inherited tendencies? How can these conditions be checked and prevented? What means and methods are possible in the rational treatment?

The second class of cases most commonly noted are those due to physical causes These are the physical and mental strains and drains, also injuries both physical and psychic The remedies here are distinct, and the means to build up and restore these defects call for therapeutic skill and judgment A third class of inebriates seem to be due to especially psychic causes, of which mental contagion of individuals, of conditions and surroundings are most prominent

Here another class of remedies and therapeutic measures are required These classes are often combined, and the various causes are blended, requiring more accurate study to determine the leading factors in each case These are conditions which provoke the early use of alcohol, and give form and direction to the progress of the case

The second part of the clinical study of inebriety is the effect of alcohol What injury has it caused? How far has it intensified all previous degenerations, and formed new pathologic conditions and sources of dissolution? Also what organs have apparently suffered most seriously from the drink impulse? and, most important of all, how far is the use of alcohol a symptom or an active cause? Having ascertained these facts, the medical treatment is the same as in other diseases, the removal of the exciting and predisposing causes, and building up the body

The first question is the sudden or rapid removal of alcohol If the patient is alarmed, and intensely in earnest to abstain, he will consent to have the spirits removed at once If he is uncertain, and has delusions of the power of alcohol to sustain life, the withdrawal should depend upon circumstances The removal of all spirits at the beginning of the treatment is always followed by the best results The reaction which follows can usually be neutralized by nitrate of strychnia, one-twentieth of a grain every four hours, combined with some acid preparation Soda bromid, in 50 or 100-grain doses every three or four hours will break up the insomnia, and cause sleep the first two nights

The withdrawal of spirits should always be followed by a calomel or a saline purge, and a prolonged hot-air or hot-water bath, followed by vigorous massage Hot milk, hot beef tea and in some cases hot coffee, are very effectual If the patient persists in a gradual reduction of the spirits, strychnia 1 20 of a grain should be given every two hours The purge and hot bath should be given every day while the spirits are used The form of spirits should be changed from the stronger liquors to wines and beers Some of the medicated wines are useful at this time, or spirits served up in hot milk There is no danger of delirium from the withdrawal of spirits, particularly where baths and purging are used freely The two conditions to be treated at this time are poisoning and starvation The system is saturated with ptomains from alcohol, and suffers from defective digestion The nutrition is impaired, and organic growth retarded Saline or calomel purges with baths meet the first condition, foods and tonics the second Not unfrequently the withdrawal of spirits reveals degrees of brain irritation and exhaustion, that are practically manias and delirium, or dementia and melancholia The essential treatment is to regulate the nutrition and elimination, then arsenic, strychnin, phosphates and iron will comprise the chief remedies that are found most useful

Many of the chronic cases of inebriety reveal dementia when spirits are removed, others show well-marked paresis, or tuberculosis Symptoms which were attributed to the action of alcohol are found to be due to previous degenerations In one case the demented talk and conduct while using spirits burst into marked dementia when the drug was withdrawn In another case, the wild, extravagant conduct of the inebriate appears in paresis when free from spirits

The removal of alcohol is often followed by tuberculosis, not suspected before, which apparently starts from some trivial cause and goes on rapidly to a fatal termination

Rheumatism and neuritis are forms of disease which frequently appear after the withdrawal of spirits Diseases of digestion are common, also diseases of the kidneys The latter is usually masked and bursts into great activity when alcohol is removed These and many other organic diseases suddenly come into view, and whether they have existed, concealed by the anesthetic action of alcohol, or have started up from the favoring conditions of degeneration caused by spirits, are not known The therapeutic requirements must reach out to meet all these unsuspected disease states which may appear any time

The removal of spirits in all cases reveals conditions of both physical and psychic degeneration that call for a great variety of therapeutic measures

The next question is to ascertain the special exciting causes and remove or build up against them In the periodic cases the early favoring causes of the drink storm are often reflex irritations from [illegible] nutrition, exhaustion and excessive [illegible] Later a certain tendency is formed for [illegible] deranged nerve energy in alcoholic impulses for relief This periodicity is often due to causes which can be studied and prevented by remedial measures In certain cases nutrient and sexual excesses are followed by a drink storm In another, exposure to malarious influences, where the disease has existed for a long time before, brings on the craze for drink In other cases, constipation, overwork, neglect of hygienic care of the body, irregularities of food and sleep, emotional excitements or depressions are followed by an alcoholic craze A vast range of psychic causes have been noted Thus, a residence on the seashore or in high altitudes, on mountains, provokes his thirst for spirits and removal to higher or lower planes is followed by a subsidence of it Many persons never use spirits except in large cities, or at special exciting gatherings, or on holidays and festive occasions Here evidently some defect of the brain exists, either organic or functional, which should be reached therapeutically Literally, many of these cases have been cured by change of surroundings as well as medicines

While the ostensible object of medication is to stop the drink craze, this is as far from being curative as the suppression of pain by a dose of opium Conditions which cause the disordered nerve force to concentrate in cravings for the anesthesia of spirits, are to be neutralized and prevented before a cure can be expected

The use of narcotics and drugs to check the desire for spirits at the beginning is temporary and always uncertain Opium, chloral and cocain given freely at this time often simply changes the drink craze for these drugs, which are used in the place of spirits ever after

The return of the drink impulse at regular or irregular intervals is in most cases preceded by premonitory symptoms, which enable the physician to use preventive remedies In certain cases calomel and saline cathartics, with prolonged baths, rest, or exercise, according to the requirements of the case, have been found curative

Various cinchona tonics, free from spirits, and iron preparations are often useful Large doses of strychnin seem more valuable after the full development of the morbid impulse, given when spirits are discontinued Some of the various coca compounds on the market have a strong influence in breaking up the drink storm

In a certain number of cases patients are unconscious of the approach of the drink storm and are difficult to treat But when they realize its coming and seek assistance the task is easier The general principle of treatment is sharp elimination through all the excretory organs and the use of mineral tonics, changes of diet and living, particularly a study of the exciting and predisposing causes, and their removal When the drink paroxysm has passed away, then radical constitutional remedies are to be used The history of syphilis calls for mercury, arsenic and potassium Defective nutrition requires a study of the diet best suited to build up the tissues

Entailments from other diseases, as malaria, rheumatism and various neurotic affections, require appropriate remedies

Tinctures of any form are dangerous The susceptibility to alcohol is so great that the smallest quantity is felt, although it may not be recognized Where spirits are taken continuously the system is always depressed all functional activity lowered and literal palsy and starvation are present

The removal of alcohol is only a small part of the treatment The demand for alcohol is a symptom of this progressive degeneration Given remedies to produce disgust for the taste of spirits, or to break up the cravings for it, are not curative Apomorphia, mixtures of atropia, hydrastin, and a great variety of allied remedies, are all dangerous, while apparently breaking up a symptom of the disease present they often literally increase the degeneration by their irritant narcotic properties and further depressing action on the organism The indiscriminate use of these, and allied drugs, in the various specifics for inebriety, is the most dangerous empiricism It is the same as opium or other narcotics for pain in all cases, irrespective of all conditions and calling the subsidence of the pain a cure Thus in the following cases a periodic after a gold-cure treatment developed into acute dementia, which ended fatally In others epilepsy, acute mania, pneumonia, rheumatism, nephritis, followed from the chemic suppression of the drink impulse In all probability the narcotics used were active, contributing causes to the particular organic disease which followed

The masked character of inebriety makes it dangerous to use narcotics beyond a certain narrow limit Cases which have been subjected to active drug treatment to suppress the desire for spirits are feebler and more debilitated than others Those who have taken the so-called specifics are marked examples and whether they use spirits again or not are always enfeebled and pronounced neurotics In all these cases there is so wide a range of causes and conditions that specific routine treatment is impossible

Strychnin has recently come into prominence and is a useful, valuable drug In some cases where the spirits are withdrawn its action is pronounced as both a tonic and stimulant Given in 1-30 grain doses four times a day, for a few days at a time, then discontinued, or given in larger doses for a shorter time, the results are usually good In some cases certain susceptibilities to the action of strychnia are noticeable and where the drug is taken to prevent the drink attack it sometimes rouses it, seemingly precipitating the condition which it is supposed to prevent This is often anticipated in the muscular tremors and nerve twitchings that evidently come from strychnia when used even in small doses

Strychnia should never be given alone, except immediately after the withdrawal of spirits At other times, combined with cinchona or other vegetable tonics, is an excellent tonic Care should be used to watch its effects on the motor nerves, and be sure that the patient is not unusually sensitive to it Belladonna, atropia, cannabis indica hyoscyamus and drugs of this class have a limited value and should be used with great caution in states of irritation following the withdrawal of spirits They are best given in combination with other drugs for a brief time and in particular cases The bromids are valuable in the same way and in the same conditions, only in much larger doses than mentioned in the text-books From 50 to 100 grains to a dose are requisite, always accompanied with baths and never continued more than two or three days Coal-tar preparations are of uncertain value as narcotics, but may be used in certain cases with good results The various mineral and vegetable acids are almost indispensable in selected cases and often can be given a long time as tonics

In the treatment of cases after the paroxysm is over, frequent changes of the form of the tonics are most valuable Iron, phosphorus, arsenic, potassa and bitter vegetable tonics should be alternated, with free intervals, for periods of months The various derangements of the system should be watched and treated with appropriate remedies and every case should be constantly under medical care The facts of the case having been studied, the question of where the medical treatment can be applied to the best advantage must be determined from the case and its surroundings

If at home the physician must have full control and his directions carried out implicitly When the drink paroxysm appears the course of treatment must be prompt and exact In one case the patient goes to bed and is secluded from all sources of excitement, in another he is sent away to the country and among strangers, in a third case a few days' residence in a hospital or asylum under the care of a physician is sufficient Hospital treatment, with its exact care and physical and psychic remedies continued for a long time give the strongest promise of permanent restoration Wisely adapted medical treatment, based on a careful study of each case, makes it possible for the family physician to treat these cases, in the early stages, with success

No single remedy is capable of meeting a wider range of conditions than the Turkish or hot-air baths, with free massage Next to this is hot and cold showers, and hot packs with free rubbing Bitter tonics and salines with regulated diet are next of importance Elimination through the bowels kidneys and skin freely are always essential Beyond this the good judgment of physicians should determine when to give narcotics and when to abandon them, always remembering their danger and very uncertain temporary action Also that the cessation of the drink craze is only temporary If this is accomplished by drug and chemic restraint the permanency is very doubtful

The subsidence of the drink symptom by the removal of the exciting causes and building up the system to greater vigor and health is the only rational treatment In this the highest medical judgment possible and the greatest therapeutic skill are essential for success The medical judgment, which will determine the exact condition in each case, and the possible range of remedies required, not any one drug or combination of drugs, not so-called moral remedies, or appeals to the will power, but a clear, broad, scientific application of every rational means and measures are demanded A large number of these unfortunate cases are distinctly curable in the early stages, and later when chronic conditions come on the possibility of cure continues to a far greater degree than is commonly supposed

It is the common observation of everyone that a certain number of cases recover from the apparent application of the crudest empiric and psychic agencies used in the most unskillful way This fact furnishes the strongest possible reasons for believing that when inebriety shall be studied and treated as a disease more generally by the profession a degree of curability will be attained far beyond any present expectation The present empiric stage of treatment should rouse a greater interest and bring the medical treatment of inebriety into every-day practice Then the family physician, and not the clergyman and quack, should be called in to advise

A new realm of medical practice is at our doors, only awaiting medical study above all theory, and exclusively from the scientific side

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ELECTRIC TRAUMATA, THEIR PECULIARITIES AND THEIR TREATMENT

Read at the thirty ninth annual session of the Medical Association of Missouri May 21 1896

BY NORVELLE WALLACE SHARPE, M D

ST LOUIS MO

Among the forces of nature that are rapidly being utilized by man in the arts, sciences and the daily needs of life, and occupying a prominent rank is electricity Its applicability is becoming multifarious, its capabilities are unknown We have but to glance over the columns of the press and note the casualties to realize the numerous accidents attributable to it alone It is needless to observe that the recorded cases represent but a meager proportion of the actual number of its victims Of the varieties used to-day, two currents stand out prominently over the others in their applicability to the needs of modern life—the alternating and direct The alternating ranging from 1600 to 2000 voltage, ordinarily, produces our incandescent lighting system The direct current ranging from 500 to 3000 voltage, supplies the arc lighting system, and in the lower voltage is the motive power in street railways, factories, etc It is obvious that with the increased usage of these agents, accidents will occur in direct proportion to the complexity of factors, and insufficiency of safeguards, unless a superior attention to safeguarding be practiced The lethal force of electricity is almost entirely dependent upon voltage or electro-motive force, being actually the result of the current in amperes, which is caused to flow through the body against its resistance, by the electro-motive force In any electric circuit the current in amperes flowing, is equal to the electro motive force in volts divided by resistance in ohms This is known as Ohm's law, and for our purpose is equivalent to stating that with a given resistance the current in amperes is proportional to electro-motive force in volts, and further, the current in amperes is the actual lethal force There are cases on record where a pressure of 500 volts has been fatal, but far the greater number of casualties have been produced by pressure exceeding 1000 volts From 1500 to 2500 volts have been employed in electrocution, the skin resistance brought to the minimum by contact sponges of large surface, wet with saline solution The usage of these technicalities may be clarified by the following suggestion Imagine a pipe conveying water driven by force, the conventional hose will suffice Thus we find that 1, the volt, unit of electromotive force equals pressure or head of water, 2, the ampere, unit of quantity equals quantity of water passing through the pipe, expressable in gallons, 3, the ohm, unit of resistance (produced by one ampere of current, under pressure of one volt in one second of time) equals the degree of frictional resistance of pipe Permitting C to equal current,—quantity,—ampere E to equal electro-motive force,—pressure,—volt, R to equal resistance,—ohm, we deduce $C = E - R$ In medical application of electricity where the resistance within the cells is large, R should be subdivided into R′, internal, and R″, external resistance the resultant equation reading $C = E - (R' +$ ″ But in el ic lighting and power systems wh iost c pressure is maintained on the supply mains, the resistance of the mains is so inconsiderable, as to be negligible Demonstration of the practicability of these formulæ is easy The pressure required for incandescent lamps (for example) is about 110 volts (being reduced on alternating current from the high voltage of mains by means of transformers), the resistance is 220 ohms Current to be found C = 110—220 or $\frac{1}{2}$ ampere for 16 C P lamp The 32 C P lamp requires one ampere, pressure 110 volts, resistance required R = 110 — 1 = 110 ohms

Of the various human tissues the skin presents the highest resistance to electric penetration (Different thicknesses produce resistance of varying degree) When it is removed, destruction is markedly intensified Skin resistance increases by dryness, moistened, especially by saline solution, it is notably diminished Experience tends to show that a current of one or two amperes is fatal to the majority of individuals The fact that comparatively low voltages in some cases have proven fatal, and victims of shock from relatively high voltages have recovered, does not necessarily show that some systems can withstand more current than others, but rather that the skin resistance was greater, or the area of contact smaller in the more fortunate cases (according to Ohm's law) Any current sent through the body being dependent upon the resistance offered (the skin being the chief factor), it follows that the larger the area of contact, the less resistance, and a proportionally greater amount of current is received It is known that a 2 or 3 per cent saline solution offers a resistance equal to about one-twentieth of that of pure water, and that sea water offers about one-fortieth The resistance offered to an alternating current by a cubic foot of pure water at 60 degrees F is 80 ohms 60 degrees, a cubic foot of water, plus 15-100 pound of rock salt is 7 ohms Elevate these fluids to 212 degrees F, pure water resists to the extent of 24 ohms, the saline solution 4 2 ohms From these data it is clear that the salinity of the sweat, temperature and humidity of the atmosphere and season of the year are all important factors in the determination of the resultant shock to an individual Of the two chief currents, direct and alternating, the former has the greater electrolytic intensity, the latter produces no permanent chemic change Death from either current is without doubt due to sudden and profound shocking of the sympathetic system

The injuries resultant from electricity range from relatively trivial burns to loss of life Of all such injuries, an overwhelming percentage consists of burns They usually occur upon the hand or forearm and differ radically from ordinary burns and scalds, in, 1 appearance, 2, accompanying pain, 3, concomitant shock, 4, prognosis, 5, subsequent manifestations, 6, reaction to treatment, and frequently 7, result I may mention *en passant* that during the four years these researches have occupied, I have failed in the search of literature upon this subject[1]

Appearance The majority of electric burns, seen early, present a dry, crisped aspect, excavated and bloodless, with surrounding zone characterized by pallor This condition changes within thirty-six hours, serous oozing obtains, the tissues soften, and hyperemia replaces the pallor

Pain is as a rule very moderate, in some cases practically absent Twenty-four to forty-eight hours after contact it is usually present

Shock Electric burns differ from other burns in that the systemic shock is from the contact, the shock from the burn *per se* being *nil*

Prognosis, in regard to time Electric burns average from one and one-half to three times as long in recovery as other burns, in some cases, dependent upon locality, such as proximity to bones and joints, the ratio is as 5 to 1 or more, prognosis, of results, is as uncertain as time prognosis, severe cases may progress relatively rapidly mild cases are often persistently rebellious to recovery, usually both mild and severe cases are tedious and prolonged

Subsequent manifestations The rule of the electric burn, from which there are rare exceptions, is that it changes within thirty-six hours from contact to a serum saturated area, with disintegrating walls and floor, progressing to profuse purulent secretion with continued tissue degeneration This degeneration will frequently involve nerve, muscle, tendon, joint capsule, ligaments, articular surfaces, periosteum and bone itself Exuberant granulations springing up, the entire plain bathed in pus, complete a picture alike distressing to patient and surgeon

Reaction to treatment is very unsatisfactory, it being apparently impossible to check the disorganizing process, especially in severe cases, with most scrupulous antisepsis or asepsis After a varying period of from fifteen to fifty or sixty days, and often much longer, firm granulation will slowly proceed and the

Result will be as good as is ordinarily secured in other burns In some cases however, owing to the disintegrating process involving bones and joints, producing necrotic masses, amputation is necessary Too much stress can not be laid upon the above clinical picture, and errors in prognosis are readily made by those who have not been brought in contact with such injuries, in regard to time and result The sloughing almost invariably present is noteworthy Frequently a burn which in its incipient measurements will not occupy more than a square inch of surface, will produce a subsequent area of four or five square inches, or more, due to degenerative changes The intensity and persistence of this process, unabated by usual surgical methods, can only be accounted for, by a local trophic death, produced by electrolytic activity in destruction This wet gangrene continues as long as the local trophic inanition lasts, and healthful rejection of sloughs, and replacement by firm granulation material, can not and does not obtain, until local trophic equilibrium is again established

The treatment of profound shock from an electric current should be instituted upon lines analagous to those pursued in shock from other agents The patient will be found pulseless or nearly so, respiration of the most feeble character or absent, warm skin which rapidly cools, with pallor, immobile pupils and absolute muscular relaxation Laborde's method of tongue traction in the horizontal position or with the head upon a lower plane than the body, is advised Frictions, heat to body and extremities, hypodermic injections of brandy, digitalis, etc, are valuable In cases where respiration is not absolutely suspended, inhalations of nitrite of amyl, until face flushes, followed by a massive hypodermic of strychnin, will bring the vital forces together, this effect should be followed by nitroglycerin Electric applications are *not* advised Dissatisfied by the poor results of classic

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[1] One day before this paper was read I was made cognizant of the fact that Moyer of Chicago had about a year ago produced an article on lines somewhat analagous to those investigated here I have not seen the article nor any other on this subject

REPORT OF CASES ILLUSTRATIVE OF PECULIARITIES OF ELECTRIC TRAUMATA

Name	Injury	Cause	Current	Duration of Injury	Remarks	Result
G L	Burns last phalanx 3d finger left, dorsum both hands	Electric wire contact	Alternating	Seventeen days	Suppuration	Good
W H J	Burns 3d and 4th fingers right 4th finger left and right wrist	" "		Between sixty and seventy days	Suppuration and sloughing involved 1st inter phalangeal joint and 1st and 2d phalanges necrosis Degeneration extended rapidly and deeply on both palmar and dorsal surfaces of finger and upward upon the hand Amputation at 4th metacarpo phalangeal articulation	Marked cicatrization, otherwise good
N F	Shock	Hand and foot contact dynamo	Direct	Instantaneous	Points of contact barely visible	Death
P O K	Burns right hand and fingers and left forearm	Electric wire contact	Alternating	Sixty five days	Suppuration and sloughing necrosis of phalanges Succeeded, however in saving phalanges	Marked cicatrization, otherwise good
C A	Burns right hand and fingers	'		About ten days	Suppuration	Good
P B	Burns left hand right wrist	'	"	Forty seven days	Suppuration and sloughing	Good
T I M	Burns left hand,	'	Direct	Eleven days	Sustained while adjusting arc lamp on a stormy night	Good
J J R	Burns thumb 1st and 2d fingers left			Twenty five days	Suppuration and sloughing	Good
J McL	Burns right hand and face	Electric "flash light "	Alternating	Three or four days	Ran a satisfactory course	Good

aseptic treatment of these cases of burns, the author, in the search for improved methods, utilized, among other agents, the following Bichlorid solutions, carbolic solutions, pyrozone solutions, chlorid of zinc solutions, in varying strengths, peroxid of hydrogen, sterilized water, hot and cold, iodoform, dry, in emulsion and in glycerin, salicylic and boracic acids, bicarbonate of sodium, loretin, aristol, tartrate of iron and potassium in solution And for the digestion of the sloughs, pepsin, trypsin and pancreatic extract in appropriate media Both moist and dry dressings were employed in various cases These agents yielded results practically analagous to the conventional aseptic and antiseptic measures of wound treatment, in some cases, the results were not as satisfactory They should be employed as adjuvants, fitted to the demands of the individual case, to aseptic or antiseptic means, and not as substitutes

CONCLUSIONS

1 The skin is the chief factor of resistance in an individual sustaining an electric shock

2 That moisture of the skin, and especially, marked salinity of sweat, favors access of current

3 Humidity and temperature of atmosphere, and season of year are important factors in determining individual resistance

4 Electric traumata differ from ordinary burns or scalds in duration

5 Electric traumata differ from ordinary burns and scalds in results (noticeable in severe cases)

6 Prognosis in all cases should be guarded

7 Rigid asepsis should be followed in the manipulation of all cases

8 Sloughs are best removed by solution of pepsin, thus Scale pepsin 2 grms , hydrochloric acid U S P 1 cubic centimeter, distilled water 120 cubic centimeters, washed off in two hours with peroxid of hydrogen, pyrozone or hydrozone Application to be repeated as may be necessary

9 Deep disintegration demands especial watchfulness for the detection of bone or joint invasion

10 Necrosis of bone should be combatted by injecting a 3 per cent solution of hydrocholic acid in distilled water, repeated not more frequently than every two hours Every second day the acid pepsin solution (see above) should be used until the necrotic masses are cleared away, when gauze packing should follow In cases complicated by tuberculosis a 10 per cent mixture of iodoform in glycerin or a 7 to 10 per cent solution of iodoform in ether, should be subsequently employed

11 Persistent bone or joint invasion with necrosis, requires amputation, or in some cases resection

12 Degenerative division of important nerves should be subsequently repaired by Levering's method

13 Degenerative division of important arteries and veins should be repaired by Murphy's method, when possible

14 Granulating areas, after sterilization, should when feasible be covered by large skin flaps

15 When healing process has started, peripheral skin growth is hastened by the use of a layer of sterile gauze saturated with an iodoform-glycerin mixture, and covered by rubber tissue

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QUINSY, THE DIFFERENTIAL DIAGNOSIS AND TREATMENT

BY J HOMER COULTER, A M , M D , Ph D

CHICAGO ILL

The fact that many presumable authorities use indiscriminately the terms tonsilitis and quinsy has led me to attempt, if possible, to emphasize the differentiation so clearly brought out by Bosworth in his late work He was, I believe, the first to make prominent the difference between the two conditions Admitting that the symptoms are often analagous, even more so than are usually seen in other contiguous structures, yet because the pathology is comparatively open to inspection, the diagnosis should in the ordinary case be made with approximate certainty

Let us briefly observe the comparative anatomy of the parts, it may add somewhat to our etiologic theories I do not find by dissection nor by any anatomic authority, that any of the muscular fibers from the palatoglossus or palatopharyngei muscles leave the striations of those muscles and branch off into the body of the tonsil, nor do they anastomose with each other until they have passed below the triangular space occupied by the tonsil This olive-shaped body, which we term the tonsil, is thus ensconsed within its position muc [illegible] th [illegible] rocks in its bony cradle, but with a [illegible] mate anatomic relation to surroundi

The lymphatics of the ton

etiologically If they anastomose to any great extent with the lymphatics of the lateral and posterior pharynx, then we might anticipate an infection in the tonsil would often be conveyed to the peritonsillar tissues Or if the action of the tonsillar lymphatics was absorptive rather than expulsive the bacteria would more likely be lodged deep in the plexus within, near the carotid artery, and we would anticipate a phlegmonous condition as a much more frequent evidence of the correctness of our etiology The comparative absence of these evidences however, must indicate that, either the lymphatics in the so-called "lymphoid ring" are not very ready bearers of bacilli, or else the intimate connection, presumed by some authorities, between the lymphoid tissues at the base of the tongue, between the pillars and in the vault of the pharynx, is an imaginary one

Some have claimed that the normal secretion of the tonsil was one of nature's antiseptics, a leucocyte guard destroying every microbian intruder, but if the leucocytes be absent from any cause, or the lacunæ be in a diseased condition, it is then but an open viaduct into the system, provided this intimate relationship between the lymphatics and the deeper tissues really existed

In those cases in which the pillars overlap the tonsil there may be pseudo-continuity of tissue formed, but such a condition, I maintain, is distinctly pathologic If a normal anatomic relation exists between the tonsil and pillar, the former will not appear as an etiologic factor in the production of peritonsillar abscess quinsy If pyogenic germs be pent in by an overlying pillar and thus forced into the surrounding areolar tissue, we may expect quinsy as a natural result Many recurrent attacks of quinsy are doubtless in some measure due to this cause

That there does occur non-idiopathic cases of quinsy can not be doubted, but the *post hoc ergo propter hoc* theory of all cases following measles, scarlet fever, diphtheria or rheumatism is open to discussion Indeed such an etiology occasionally receives a severe "shaking up" by the deductions of clinical experience In most cases the origin is in the peritonsillar areolar tissue Oftentimes on account of the intensity of the inflammation and edema the tonsil is protruded, but seldom indeed, if ever, is it involved in the inflammatory process anterior, posterior, or, in severe cases, surrounding it

If there existed a more intimate natural continuity of tissue between the tonsils and the surrounding areolar tissue, we might expect from these bacteria traps a very frequent infection and consequent quinsy Hence it may be argued that the tonsils, even though pathologic, may be in a measure a preventive rather than a cause of quinsy Bosworth says "An acute tonsillitis does not, and can not develop a quinsy without some particular predisposing cause or dyscrasia"

Mechanical, chemic or traumatic influence may each be active in certain cases Certainly, sudden changes from heat to cold, with draughts about the head, produce a fertile field for this disease A strumous diathesis, that popular scape goat of the "case reporter," and bane of the conscientious etiologist, should not be forgotten on so appropriate an occasion Bosworth and others are inclined to think a very large percentage of these cases are due to an uric acid diathesis If so, why does it not occur more frequently in rheumatics? My experience does not confirm such statistics In my cases, rheumatism has not occurred more frequently than has a neurotic temperament, which condition I should hesitate to offer as an etiologic factor of any considerable importance

With the anatomic relations of the tonsils in mind, and the most probable and only tenable theory of quinsy being that of a specific bacteria, the exact nature of which remains to be discovered, we can posit as our differential definition of quinsy An acute inflammatory action in the peritonsillar areolar tissue, usually resulting in a suppurative process

The symptoms in general are so well known that I will not unnecessarily lengthen this paper with a detail of them, only to such an extent as may be necessary to elucidate the differential characteristics of those pathologies most likely to be mistaken for quinsy Those occasionally encountered are, follicular tonsillitis, the early stages of the exanthemata, acute pharyngitis, fibroid tumor, aneurysm, syphilis and that severer form of acute infectious phlegmon or retropharyngeal abscess, which is characterized particularly by its always serious and most frequently fatal prognosis

In all tonsil inflammations the tonsillar gland is more or less hypertrophied, and shows evidence of recent or present inflammatory action It is usually less painful than quinsy Deglutition is more easily accomplished, though dysphagia is common in both The peritonsillar tissues are not swollen, except as they may be pulled toward the median line by adhesions to the tonsil In tonsillitis there is less tenderness, though this symptom may depend somewhat on the temperament of the patient If the tonsil has been thoroughly extirpated, tonsillitis is necessarily excluded Ear complications can scarcely be caused by tonsillitis Respiration is not as a rule embarrassed by quinsy The tonsils are not always enlarged in quinsy, while a peculiar fetid breath and constipation are almost invariably present Another, to me, almost pathognomonic symptom of quinsy is the inability to expectorate

In the early stages of the exanthemata, and the first thirty-six hours of quinsy, there is certainly often much difficulty in making a positive diagnosis In diphtheria the temperature is subnormal or slightly increased The possible prevalence of contagion would be an important factor In these exanthemata the throat is rather sore than painful, there is also more hyperemia A membrane would indicate, though not insure diphtheria

It scarcely seems possible that one could mistake a fibroid or other benign tumor for quinsy, yet such mistakes have been made Its density, duration and freedom from pain and temperature would positively differentiate it in any case Syphilis, in the tertiary form, might confuse one unaccustomed to seeing either condition frequently But the history of the case should be sufficient Ulceration, moreover, does does not occur in quinsy

Aneurysm, in general appearance, would most closely resemble quinsy But its infrequency and history, as well as absence of pain and other symptoms, would certainly prevent error

The acute infectious pharyngeal phlegmon fortunately, does not occur very frequently It nevertheless is an important point in this consideration I surmise that when at some time, a plodding investigator succeeds in making a specific bacteria culture from both conditions, they will be found to be identical The former differing from quinsy, mainly in the intensity of its toxemic virulence Infectious phlegmon also attacks the deeper tissues and posterior pharyngeal wall, extending downward, the respiration becoming embarrassed as the abscess increases in size Spondylitis is not infrequent in infectious phlegmon, but whether as a cause or as a result, authorities disagree Certain it is, however, quinsy is not associated with spondylitis either as cause or effect In the infectious phlegmon, the face is more congested and livid, the neck stiff, the muscles tense and prominent, and the usual quinsy symptoms greatly intensified Quinsy may occur in children, rarely so the other disease In case it is a simple pharyngeal abscess, it may occur in childhood Retropharyngeal abscess is not so acute, painful or serious, and is amenable to the treatment of abscess in other parts

Treatment—In any suggestions as to abortive measures, I recognize the fact that we do not usually see a quinsy patient until the disease has been progressing for twenty-four or more hours To abort it at this stage is out of the question, in almost any case We can not claim for any medicinal remedy or combination a positive abortive effect in a case of quinsy

In every case it is advisable to give a good mercurial cathartic, followed by a saline Unless we are reasonably positive of the presence of pus, when the case is first presented, I do not believe the use of the knife is advisable at that time We must not provoke the inflammatory action by a too hasty attempt to relieve our patient by incision We have all too often seen a veritable stabbing process performed in and about the tonsil, in the fruitless endeavor to locate the abscess It appears to me this might usually be avoided by previously assuring ourselves with a careful differential diagnosis

For many years the stereotyped line of prescribing had been quinin, opium, guaiacum, sodium salicylate, aconite and belladonna, either singly or in compound, as the opinion of the prescriber was guided by experience I have no word of criticism for these They were good, and doubtless afforded a vast relief in the aggregate But as all things must change, and we tire, even of friends at times, so when improvements are made we must accept them as such More recently salol has come into quite general favor

From 1892, when I listened to Dr Newcomb in his exhaustive paper on the treatment of tonsillitis medicinally, at the meeting of the AMERICAN MEDICAL ASSOCIATION in Detroit, until about one year and a half ago, I have felt that salol was the remedy *par excellence* for these cases At that time three cases, all clerks in the same department of one of our largest establishments, presented themselves at the same time Two of them roomed together, the other lived with his parents Such a coincidence at least suggested the possibility of contagion A broken window on a cold, damp day was the presumable etiologic explanation They were all suffering intense pain Two of them had typical attacks of quinsy the other tonsillitis I used my usual applications, advised hot gargles and poultices, prescribing salol with rather confident promises of speedy relief I had had two positive, and two doubtful failures with salol in the three years experience previously, so that to find my patients growing worse for thirty-six hours did not entirely surprise me Free incision was meanwhile made without obtaining pus, in either case of quinsy The tonsillitis was further advanced, and was much relieved by the incision In the other two I prescribed lactophenin, 10 grains every three hours, after the second dose Mr B was almost entirely relieved of pain, the temperature the following morning was 99 2 The other symptoms were likewise very much ameliorated In the case of Mr R, the third dose relieved him quite as completely At this visit I was able to thoroughly evacuate the pus and cleanse the cavity, affording the usual relief in such cases

Since the above experience I have used the remedy in twelve cases of quinsy, and in all but one instance the results have been most gratifying to myself, and I am sure not less so to the patient These patients have been first seen in all stages of the disease, from the first hour of the attack to the fourth day, and in one case, in consultation, on the sixth day

The average time of relief has been about four hours In all but three the relief was decided before the knife was used In each of these three there were evidences of pus present, and the bistoury was used at once, so that the part played by the remedy is indeterminate

I have in these cases given the lactophenin to the exclusion of every other remedy internally, excepting the cathartic already referred to, not omitting, however, the usual hot gargles and external applications

My reasons for preferring it to salol are Its action is decidedly more prompt, it has thus far given me no undesirable after effects, it not only relieves the pain, but reduces the fever with an equal certainty In cases of evident rheumatic diathesis I should certainly employ, in addition thereto, my customary remedies

103 State Street

THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE

Read before the American Medical Association at the Jenner Centennial Celebration, held at Atlanta Ga, May, 1896

BY EUGENE FOSTER, M D

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE AND STATE MEDICINE AND DEAN OF THE FACULTY OF THE MEDICAL DEPARTMENT UNIVERSITY OF GEORGIA, AUGUSTA GA

(Concluded from page 958)

HUTCHINSON'S CASES[4]

First Series—Patients first seen seven weeks after vaccination Vaccinifer four months old, healthy looking, vesicle eighth day lymph To the vaccinator and the surgeon, she at the time the lymph was taken, bore the aspect of excellent health All of the vesicles from which lymph was taken bled Two months afterward Mr Hutchinson saw vaccinifer "My attention was, however, at once attracted to a slight peculiarity in the tint of her skin and to the look of her face, and although it was strongly denied that she had ever 'snuffled,' yet when she was made to cry I noticed a nasal twang which was very suspicious On having her stripped, not a single spot of rash could be seen on her skin, but on inspecting the buttocks five small circular condylomata were discovered close to the anus, about which there could not be the slightest doubt Mother detected condylomata about a week previously, but declared infant had never been ill I could not find in the mother herself any indications of syphilitic taint, nor obtain any history of suspicious symptoms Did not have opportunity to inspect father A fortnight later, sought child at its home The child then looked more ill than when first seen the condylomata were in the same condition It had no rash. Its head [illegible] enlarging, and its mother complained that it was wasting [illegible] About the existence of constitutional syphilis in the infant [illegible] the date of my examination (two months after [illegible]) there could not be any doubt and scarcely any as to [illegible] having been an inherited one There can, I think, be little doubt that in this instance it was the blood, and not the vaccin lymph, which was the source of the contamination

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[4] Quoted from Illu[illegible] of C[illegible] By Jon[illegible] Hutchinson F [illegible] 1887

Second Series —Patients seen about seven weeks after vaccination History of vaccinifer Child stout, well grown, seven months old, selected as vaccinifer from amongst several others, as being most healthy present Excepting a little transitory "tooth rash," probably lichen, on the face he had no eruption His head was decidedly large and the fontanelles widely open Mother said this had been noticed, for a few weeks Mother said "he had snuffled a great deal" No trace of rash on child's skin, but at anus there was a single small condylomatous patch just healing Saw infant several times during six weeks after this first examination, but no symptoms of a more definite character showed themselves The condyloma soon healed and with the exception of a slight tendency to hydrocephalus, the infant, at time I last saw it, might have been regarded as a specimen of excellent health Several persons vaccinated from it mentioned it was very healthy looking at time lymph was taken No trustworthy evidence could be obtained as to whether blood was or was not transferred in the operation of vaccination No syphilitic symptoms found in either parent Father denied ever having had venereal disease, and submitted to personal examination at my office, and we failed to detect anything of a nature to cast suspicion on his denial

Third Series —Patient seen three months after vaccination History of vaccinifer Vaccinator says vaccinifer was a model of vigor and health He presented child to me I found a very large and very fat baby, eight months old It had no rash, nor any trace of condyloma, and the only point about it suggestive of syphilis was the state of the bridge of the nose, which was decidedly broad and sunken Mother appeared in good health, says the first two children died in infancy This is only child living

Fourth Series —(One case) Patient first seen fifteen months after vaccination History of vaccinifer Patient says vaccinifer puny at time of vaccination, and the mother ill Does not know if vaccinifer's arm bled or not Vaccinator denied that child looked puny at time of vaccination Patient was probably last but one out of a considerable batch vaccinated from child Mother of vaccinifer had borne three children previously The eldest is a boy 10 years old, has no symptoms of syphilis Second child stillborn Third child a girl 4 years of age, who had no special symptoms in infancy excepting that for several months during teething she had very troublesome ulcers at the anus (condylomata), also had tendency to water on the head Vaccinifer (fourth child) was four months old at date of vaccination, and appeared, according to the mother's statements, to be perfectly well Subsequently, however, when dentition commenced he, like his elder sister, had very troublesome sores about the anus and a tendency to water on the head For the anus he was three months under treatment at a dispensary At twenty three months of age patient is living, full grown, and shows no peculiarities except ing a large forehead Surgeon who treated child for trouble of anus says vaccinifer had syphilitic condylomata, snuffles, a slight skin rash, and was very cachectic when he treated him He did not ask the parents any direct questions because he was perfectly certain as to the nature of the ailment

Fifth Series (two cases) —Patients first seen seven months after vaccination Surgeon which did the vaccination could give no important facts (History of vaccinifer entirely unknown to Mr Hutchinson)

Sixth Series —No history of vaccinifer could be given, as lady had been vaccinated in India

In contrast to these cases of alleged transmission of syphilis by vaccination, the following, a few of quite a number of cases are cited in which physicians of the highest professional standing took as vaccinifers persons known to be syphilitic at the time, and from them vaccinated a number of persons known not to be syphilitic, and failed to develop the slightest manifestation of syphilis in any one of the persons so vaccinated

Name of Experimenter	Number Vaccinated	Number Infected with Syphilis	Number not Infected with Syphilis
Bidard	6		6
Mountain	30		30
Schreirer	2		2
Jonkoffsky	57		57
Delzenne	9		9
Bourguel	55		55
Guerin	55		55
Total	214		214

To these must be added the numerous experiments of Boeck, Cullerier, Taupin and Heyman Boeck experimented on a large number of cases, and he took great care to mix the blood of the vaccinifer with the vaccin lymph Here we have a record of three hundred or more direct efforts to produce vaccinal syphilis and every such effort was unsuccessful It must be admitted that these experiments are a thousand fold more valuable than the details of cases of alleged vaccinal syphilis, for they were conducted under intelligent supervision, and in accordance with conditions which were carefully observed From these experiments the experimenters could and did know that the vaccinifers were syphilitic, that the lymph of a genuine vaccin vesicle was used, and if or not it was admixed with syphilitic blood or other inoculable matter It should be remembered, in comparing these data, that the reports of cases of alleged vaccinal syphilis were wanting in every one of these essential points of observation, they were entirely accidental and were not expected to occur Dr Viennois of Lyons made an exhaustive investigation of vaccinal syphilis, and as result of his labors said "There is no infectious quality in the vaccin matter itself, and if we employ the vaccinal fluid only in inoculating a healthy child, the operation will be safe If the vaccin matter taken from a syphilitic subject is without any admixture of blood the result will be a vaccinal pustule only, without any syphilitic complications, either immediate or future" This, gentlemen, is the teaching of the profession of medicine in all countries at the present day That some few persons have been infected with syphilis by persons attempting to vaccinate them, no one is ready to deny, but when such results followed, they were probably inoculations with syphilitic blood or virus, not vaccin virus No physician, except for experiment, should ever vaccinate any person to serve as a vaccinifer, unless such person be in undoubtedly good health and known to be free from scrofula, consumption or syphilis This proposition is reasonable, for it is wrong to risk unnecessarily anyone's health

Call the attention of vaccinophobists to the fact that vaccinal syphilis has been so rarely pointed out, and they will say the profession is a body of blind worshippers over the grave of Jenner, and has never tried to ascertain the truth of the matter Let us see if this be true In 1856, fifty eight years after vaccination had been generally practiced, the Board of Health of London issued a circular letter addressed to the various governments, asking information in relation to vaccination and its results This board propounded the following searching question, among others "Third Have you any reason to believe, or suspect, that lymph from a true Jennerian vesicle has ever been a vehicle of syphilitic, scrofulous or other constitutional infection to the vaccinated person, or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?"

The Imperial Society of Surgeons at Vienna, Austria, replied "Although it may be maintained that the blood of individuals affected with secondary syphilis can serve as a vehicle for this specific contagion, even this theory (if it could be proved) would not exercise any influence on the practice of vaccination, for both experiments made on purpose (Heim) and accidental vaccinations have taught that without considering the quality of the vaccin lymph, that taken from syphilitic subjects may have been used upon healthy persons and the contrary viz, from healthy individuals and used upon persons suffering from syphilis, without, on such occasions, the latter disease having been conveyed with the cowpox What has been proved in reference to syphilis may be applied equally to all other dyscrasic diseases, since this, even in cases of direct vaccination with their morbid products, has always shown a negative result"

The Faculty of Medicine at Prague replied "The experience obtained in this country gives no grounds which leads to the belief or presumption that the consequence to a vaccinated person can be such as put forth in this question"

The Imperial General Hospital of Vienna replied in like manner with the Faculty of Medicine at Prague

The Imperial Lying in and Foundling Hospital replied: "A true vaccin pustule can not become the vehicle for conveyance of syphilitic or any other contagion"

From Bavaria the following reply was given "In Bavaria up to the present time, two cases have happened of syphilis being inoculated with vaccinia That was, however, in each of those cases the fault of the vaccinating physicians themselves, and the accident could in either case easily have been avoided, since syphilis was unmistakably present in the children from whom the lymph was taken The inoculation of syphilis can at all times be avoided by an observant surgeon who uses due circumspection in choosing the subject from whom he will take lymph for vaccination"

The answer from Denmark was as follows: "The experience which we have acquired in this country does not lead to the supposition that lymph taken from true vaccin can be the means of communicating any scrofulous or constitutional contagion."

The Duchies of Holstein and Lauenburg said: "The experience which has been gained in the Duchies of Holstein and Lauenburg requires an answer to this question unconditionally in the negative."

The same question was propounded to every prominent physician and surgeon in Great Britain, including physicians and surgeons in charge of all the vast hospitals and public charities and vaccin stations, and no one of them failed to answer it in the negative.

Dr. John Simon, Chief Medical Officer of the Privy Council, examined thoroughly and exhaustively all the alleged cases of vaccinal syphilis, and, in his report for 1869, says but fourteen of all these alleged cases were to be attributed to vaccination, and every one of these fourteen cases were, he says, the result of malpractice on the part of the vaccinator. "If," says Simon, "our ordinary current vaccination propogates syphilis, where is the syphilis it propagates? Who sees it? The experience of this department is an entire blank upon the subject. For the last ten years we have been in incessant intimate communication with the different parts of England on details of public vaccination, and during these ten years every one of about 3,500 vaccination districts into which England is divided has been visited three or four times by an inspector specially charged with the duty of minutely investigating the local practice of vaccination, yet, from this systematic and extremely detailed search for all that has to be said upon the subject of vaccination in England, no inspector has ever reported any local accusation or suspicion that a vaccinator had communicated syphilis."

Hutchinson's cases have since been reported.

In North Germany, so late as 1873, the testimony has been given that only two cases of alleged vaccinal syphilis have occurred during twelve millions of vaccinations made there up to that date. Syphilographers—those men who are most highly accomplished in the study of the causes and sources of syphilis—have almost unanimously declared that the alleged cases of vaccinal syphilis were but inoculations with syphilitic products, and such results will never follow vaccination, even from a syphilitic subject, if lymph from a genuine vaccin vesicle be used. Venereal specialists such as Lancereaux, Cullerier, Ricord, Langston Parker, Acton, Lee, Bumstead, Hammond and Keyes, never, in the whole course of their vast experiences, met with a *single instance of vaccinal syphilis*. But let it be admitted (in order that there may be some ground for the discussion) that every one of these cases of alleged vaccinal syphilis reported above was consequent upon vaccination duly and intelligently performed, even this would not detract one iota of the value of vaccination—the grandest discovery which has ever yet blessed man in his checkered career upon earth. Vaccination is capable of saving at least one million human lives every year; and if syphilis is actually proven to have occurred one time in a million vaccinations, is not all this fuss about vaccinal syphilis as a rational ground for abandoning vaccination the old story of the mountain in labor bringing forth a mouse?

The following extract from a letter (April, 1870) from Dr. Seaton, throws a flood of light upon this question of vaccinal syphilis:

"I am not aware of any fresh case of alleged introduction of syphilis by vaccination with humanized lymph since I published my book, but curiously enough there has been discussion lately in France on some cases of syphilis in children who had been vaccinated with animal lymph. Of course, the syphilis was a latent syphilis, and the vaccination could have had nothing to do with it except perhaps to hasten its evolution; but the cases are instructive, and point, in my opinion, to the explanation of all the alleged cases of vaccin syphilitic inoculation with humanized lymph except those in which there was downright carelessness and mixture of or substitution of viruses."

To show the dangers of contracting syphilis which beset man at every turn in life, the following illustrations are furnished.

But we have recently heard intelligent physicians say that if one case of syphilis is proven to have followed vaccination, then vaccination must be abandoned. Gentlemen, this is serious ground; and if applied with the same rigor to the other branches of our profession the practice of surgery, of gynecology, of obstetrics, and dentistry must be abandoned. And if applied to man in all his surroundings with the same vigor he must live on air, for syphilis has been frequently caused by the necessary processes of eating food and drinking water. Further than this, if a few cases of syphilis contracted in any manner are to doom all things from which they were contracted to be banished from use by man, then our race must be content with the covering of skin placed upon him as he sprang from the hands of his Maker, for syphilis has been caused repeatedly by infected clothing. Let us take the simple process of cupping, to forcibly illustrate this proposition. It is a well established fact that an epidemic of syphilis was produced at Brun, in Moravia, in 1577, by cuppings done by the bath man of the town. Suizer observed cases of the same nature at Bamberg in 1602; Horst, at Ulm in 1662; Wideman, at Windshelm in 1620—in the latter instance seventy cases of syphilis were caused by the simple process of cupping. Catheterism of the Eustachian tube is a very delicate yet harmless operation, and certainly syphilis is not a necessary consequence of its performance, yet a number of cases of syphilis from this source have been established—as many as thirteen such cases have been reported at one meeting of the Medical Society of Hospitals in France. The operations of circumcision, catheterism of the bladder, uterine examinations, accouchment, removal and transplanting of teeth, the lancing of a furuncle, have caused numbers of cases of syphilis, and if the rule sought to be applied to vaccination be invoked against these operations, then their performance is criminal. Even the forks and spoons and drinking cups and tumblers have caused large numbers of cases of syphilis, and yet who is ready to abandon the use of these articles because some fellow with a syphilitic mucous patch in his mouth used them, and a careless and filthy butler placed them back on the table without cleaning, and syphilitic infection followed? Again, it has been shown upon as reliable testimony as vaccinal syphilis, that wearing apparel and bedding used by a syphilitic person and afterward used by a careless or filthy son of Adam have caused syphilis; but we think the day is far distant ere this clothes worshipping and bed loving people will abandon these comforts because a few cases of syphilis have followed their use. These cases are all due to the same causes, *i. e.*, gross and inexcusable carelessness or filthiness.

That these cases have occurred is beyond question, and have produced ten times as many cases of syphilis as vaccination. The kiss of a lover has caused, by reason of mucous patches on the tongue, more syphilis than every one of the alleged cases of vaccinal syphilis. How often, Mr. President, do we meet with cases where, in consequence of ill health of the mother, or of insufficiency or total absence of flow of milk, a wet nurse is necessary to furnish food for the infant. There is scarcely a month but what the busy practitioner meets with such cases. Now, *it is well known that syphilis has been caused in a vast number of infants by infection from syphilitic nurses*. And yet because these unfortunate results are found, are we to forego the advantages of wet nursing, and thereby consign such children to the grave by resorting to cows' milk, or other more indigestible nourishment? Should we not display more prudence and judgment in selecting wet nurses? Again how frequently have wet nurses been infected in nursing syphilitic children.

It must be admitted that in submitting to vaccination man incurs no greater risk of contracting syphilis than he does in submitting to the minor harmless operations in surgery or dentistry, or in the necessary process of eating food and drinking water in hotels, restaurants, railroad trains, hospitals, etc.

If vaccinal syphilis is thought to be liable to be transmitted by humanized vaccin virus, then those fearing this result have in bovine virus a full protection against such an accident. But this remedy will not satisfy antivaccinists, for when Dr. Carpenter made this statement Dr. P. A. Taylor (their leader in England) replied:

"I observe you add that 'tens' out of every 16,000,000 would vanish under calf vaccination. Of course you are perfectly aware that it is not yet a settled question whether what is called spontaneous cowpox is (contrary to Jenner's opinion) protective against smallpox. Professor Simonds, Principal of the Royal Veterinary College, is (or was in 1879) distinctly of an opposite opinion. Speaking at the London conference on Animal Vaccination, he used these remarkable words: 'If this be so you must fall back upon one of the old methods, and must inoculate your calf either with human smallpox or horse pox. In the former case, you come under the statement of Sir Thomas Watson that by the use of this lymph 'there must have been a vast amount of mitigated smallpox spread about.' If you fall back upon the horse, you will be liable, I suppose, to such horrible outbreaks as that of glanders under which thirty eight children are supposed to have suffered in Italy.' The following is from the *Lyon Médicale* of June 22, 1879: 'On April 26 and 28 the local doctors vaccinated wi lymph (animal lymph) thirty eight children, all aged 1

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twenty months While they were awaiting the incubation of the vaccin pustules, they soon perceived that they had inoculated one of the most horrible of maladies, and that they were the involuntary authors of a real massacre of the innocents The gentleman who sent these particulars to the *Gazetta d' Italia* betook himself to San Quirico He saw the victims He observed vast phlegmons laying bare the muscles and penetrating into the joints, accompanied by eclamptic symptoms To him it appeared to be very probably an epidemic of glanders ' But even supposing you are able to inoculate with 'spontaneous cow pox,' what is to secure against the transmission of bovine disease? I take the following from a letter sent by the guardians of Ashton under Lyne to the president of the local government board a few months since

"On December 13, 1879, Mr Simon wrote —'When a given (animal) body is possessed by one of these constitutional diseases (scrofula, syphilis, etc), no product of that body can be warranted safe not to convey the infection ,' and Dr Creighton, of Cambridge University, gives the history of twelve cases of bovine tuberculosis in human beings, the disease being a more rapid form of consumption than that peculiar to man "[48]

"As the new lymph will be obtained from bovine animals, in whom this tuberculosis is hereditary, and occurs in 4 75 per cent of any given number of cows, the guardians are anxious to know if the local government board is prepared to take the responsibility of introducing another formidable disease (bovine tuberculosis) to man by means of the system of vaccination * * *

"Some crazy enthusiasts recommend that lymph be taken direct from the cow They can not surely have seen those frightful pictures of the disease so produced, which were published by Mr Ceely, of Aylesbury, some thirty years ago "[49]

After detailing the advantages of animal vaccination, Dr Warlomont answers the objections to those who affirm that bovine tuberculosis and charbon may be transmitted by means of animal vaccination It is admitted, in the first place, that tuberculosis may be inoculated The experiments of Villemin, afterward established by Koch, demonstrate the possibility of transmitting tuberculosis by bacterial infection, the bacteria being also susceptible of cultivation apart from the body

After detailing carefully the various experiments of Cohnheim and Baumgarten upon monkeys, rabbits and guinea pigs, including those in which tubercular tissue as well as blood taken from freshly killed tuberculous animals, was inoculated into the eyes of rabbits, Dr Warlomont sums up as follows

"It is to be inferred from the preceding data that the bacillus of tubercle can transmit tuberculosis either by means of tubercle itself, or by tuberculous blood, or by air exhaled from an infected lung * * * It would be puerile to overlook the importance of these data in their relations to vaccination, either animal or human The security henceforth endangered must be no longer established upon theoretic grounds It must be supported by experimental facts which, fortunately, are not wanting An extremely important fact is demonstrated by the experience acquired in the inoculation of tubercle, viz , *it is thus far found to be an impossibility to produce tubercular infection by the superficial insertion of bacilli* In order to reproduce tubercle in an animal, it is necessary *to convey the bacilli into the depth of the tissues* It is thus explained why no one is ever infected in making autopsies of tubercular subjects, and also *a fortiori* that no one has ever been infected with tuberculosis by the process of vaccination * * * The absence, therefore, of a single fact establishing the possibility of producing tuberculosis by the superficial insertion of tubercle, as in the usual act of vaccination, assures us of the impossibility of such transmission, when the operation is performed with products having only remote relations to it "

The developments of modern pathology clearly prove that Warlomont was in error when he said "An extremely important fact is demonstrated by the experience acquired in the inoculation of tubercle, viz , it is thus far found to be an impossibility to produce tubercular infection by the superficial insertion of bacilli In order to reproduce tubercle in an animal it is necessary to convey the bacilli into the depth of the tissues " Sternberg, in his magnificent work on bacteriology, Ziegler, general pathology, and Green in his work on pathology and morbid anatomy, 1895, all tell us that tubercular infection in man can and has been known to result from slight abrasions of the skin Therefore if matter of any kind containing tubercle bacilli be brought into contact with the skin abraded for vaccinal purposes it is altogether possible for the individual so treated to become infected with tuberculosis Now, while this is possible, as proven by the most recent researches of pathology, this danger is so infinitesimal as to be practically non existant How is this proven Every modern authority upon pathology insists that when tuberculosis results from bacilli entering the system through a lesion of the body (an abrasion of the skin, for instance) it leaves behind a permanent change at the portal of entrance In other words, that tuberculosis is at first a local disease, the formation of tubercle at the point of abrasion for vaccination, for instance Now for the test Of the hundreds of millions of vaccinations performed from 1796 to this day, no single observer has ever been able to point out so much as one case of tubercular process at the point of vaccination from either humanized or bovine vaccin lymph, crust or scab The medical literature of the whole world does not furnish a single example of tuberculosis proven to have been in traceable connection with vaccination humanized or bovine But suppose tubercular infection did occasionally result from vaccination would that be a rational demand for the medical profession or mankind to eschew vaccination? Apply this rule of avoiding all danger and what results? Surgical operations must cease, for a vast legion of human beings have died from anesthesia Opium must be thrown away, for in thousands of instances death has resulted from opium narcosis even when the drug was given by the most skillful men of our profession Not one single instance has ever been recorded wherein vaccin lymph, even in a tuberculous subject, has ever been found to contain tubercle bacilli Tuberculosis is a specific disease and can not result except by planting the bacilli in the system through a bodily lesion There are no tubercle bacilli in vaccin lymph, therefore there can be no tuberculosis engendered by vaccination But tubercle bacilli crowd men down at every turn by infection, ordinarily through respiration A disease so universally and constantly threatening man as does consumption , it is idle bosh to engage in an idle warfare upon vaccination to prevent consumption, a disease more generally prevalent and fatal in pre vaccinal times than it is at present I could fill chapter after chapter with records showing incontrovertibly that consumption was more prevalent in pre vaccinal times than at present I give you only one instance In the table already presented showing the general differential death rate in London per 100,000 living at seven different periods during the 226 years, 1629 to 1854, the mortality from consumption was as follows From 1629 to 1636, 1,021 , 1660-79, 1,255 , 1728-57, 905 , 1771-80, 1,121, 1808-10, 716 , 1831-36, 567 , 1840-54, 323

Here, then, is the proof, and from it there can be no appeal that the consumption death rate in pre vaccinal times was nearly four times as great as that of 1840-54, fifty years after vaccination was resorted to in London Furthermore, the table shows that in the face of an increasing vaccination rate the consumptive death rate was not one half as much in the period, 1840-54, as it was in that of 1801-10 To argue this question further would be an insult to your intelligence

Erysipelas —This is another bugbear of vaccination to antivaccinationists No truthful man would pretend to deny that erysipelas is occasionally observed to attack the vaccinal process But erysipelas is in no sense an integral part of vaccination It is always and under all circumstances an epiphenomenon Vaccinia and erysipelas are each specific diseases and differ one from the other as widely as daylight from midnight darkness They are as essentially different entities as wheat and corn Neither disease can give rise to the other more than seed corn can produce wheat Erysipelas in connection with vaccination results from infection of the vaccinal wound with the germ of erysipelas In other words, the erysipelas is due to the infection of the wound with streptococcus erysipelatis, the wound happened to be that of vaccination Only this and nothing more But, really, erysipelas does not occur near so frequently in association with vaccination as it does in association with minor surgical wounds If all the requisites of modern surgical asepsis were carried out with cases of vaccination erysipelas would rarely, if ever, be encountered The vaccin wound, vesicle and scabbing is left unbandaged, which is not done with other minor surgical operations, and the wonder is that it is not more frequently encountered The vaccination wound being left uncovered is constantly an open door for entrance of the poison from an infected atmosphere, infected hands, clothing, etc , of the patient and his attendants In a recent report of the Royal Health Office of Germany it was shown that out of more than 2,225,000 vaccinations made that year there were eleven deaths from erysipelas Every intelligent, truthful student of medical history is forced to admit that without exception a similar number of wounds encountered in minor surgery has furnished more deaths from erysipelas than has vaccination But let it ever be remembered that if there had been ten times that number of cases of erysipelas in connection with vaccination the former was in no wise an integral part of vaccination The existence of these cases of erysipelas loudly calls for better care of our vaccinal patients, but is not a tittle of argument against the propriety of vaccination

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[48] October number of Journal of Anatomy and Physiology

[49] Current Fallacies about Vaccination by P A Taylor M I London 1881

Vaccinal syphilis —Not one case of this disease was observed among these 2,225,000 vaccinations

Inflammation of lymphatic glands and ducts —Out of 2,225,000 vaccinations of the year there were four cases of inflammation of the lymphatic glands and ducts There was no mention of death or permanent injury to health from this cause

Inflammation of skin surrounding the vesicle —Among the two and a quarter million of vaccinations made in Germany the same year a number of cases of severe inflammation of the skin in the neighborhood of the vaccin vesicles were observed, but no cases of permanent injury to health, or death resulted These inflammatory conditions were by the inspectors generally attributed to irritation by the clothing, by scratching and by other mechanic means, for instance, the vaccinees during vaccination continued their arduous labors in the fields and mechanical pursuits

An examination into all the facts relative to these cases showed that nearly every one of them was in direct traceable connection with faulty methods of vaccination or carelessness on the part of vaccinees or their parents

REDUCTION OF GENERAL MORTALITY

"Drs Greenhow and Farr, under the auspices of the General Board of Health of London, have shown that, with the decline of smallpox consequent on vaccination, the general death rate has greatly diminished from all causes, and that, too notwithstanding a severe and fatal epidemic of influenza and two epidemics of cholera, and under this diminution it is especially notable that the two classes of disease usually considered the most fatal—namely, scrofulous and low febrile affections—have diminished in a remarkable degree The general death rate per 1,000 of living population, during the periods of 1846-55, was 25 per cent less than the decennial period of 1746-55, and 40 per cent less than the decennial period of 1681-90, showing a successive decline since the remoter period from 421 to 355, and since the more recent period from 355 to 249

"According to Dr Farr's statistics, the average annual death rates in London, from all causes and all ages, per 10,000 living, were

From 1771-1780	500
" 1801-1810	292
" 1831-1835 (smallpox prevailed)	320
" 1840-1854	248 9

"The average annual death rates in Sweden, from all causes and all ages, per 1,000 living, were

From 1776 to 1795	268
' 1821 to 1840	233
" 1841 to 1850	205

"In McColloch's Descriptive and Statistical Account of the British Empire, Dr Farr has shown that fever has progressively subsided since 1771 (at first under the influence of inoculation), 'and that the combined mortality of smallpox, measles and scarlatina is now only half as great as the mortality formerly occasioned by smallpox alone '

"According to the researches of Dr Greenhow, previous to the introduction of vaccination, the death rate from scrofulous diseases was five times greater than it is at the present time, and the present death rate of pulmonary consumption, great as it is, is 7 per cent lower than it was previous to Jenner's discovery "[50]

But let us appeal to vaccinophobists for a preventive of smallpox, and they will say ' We believe in sanitation Let the people have an abundance of pure air, water and food, and smallpox will not appear " Now, what does the whole science of medicine testify as to the etiology of smallpox? Here it is in a nut shell Smallpox spreads at the present time exclusively by means of a specific virus which is begotten in the body of a smallpox patient, and is conveyed directly by exposure of the person to one sick of smallpox or coming in contact with infected clothing, bedding, etc How absurd then, is the claim for sanitation, for you can take an unvaccinated person to the purest air of the country, even upon mountain tops, and put him in contact with the virus of smallpox, and he will contract the disease as readily as if directly exposed to it in the filthiest slums of the filthiest population on earth The same is true of water and food, whatever their purity But put your unvaccinated subject into a house where all the decaying garbage of a city, both animal and vegetable is piled high as the second story window then pour water all through it, and call upon the heat of the sun to set all this putrefying mass into the most active putrefactive fermentation, and if smallpox virus has been kept away from it, your subject may die of a zymotic fever, but never of smallpox

Now as to the last part of my subject

THE FUTURE OF SMALLPOX AND VACCINATION

This depends wholly upon man's action in the future With all this incontrovertible testimony before us (and a thousand pages of a similar kind can be presented if need be) it is proven beyond the shadow of a doubt that in vaccination and revaccination duly and efficiently performed, man is capable of exerting absolute mastery over smallpox The existence of an epidemic of smallpox at the present day, under the known prophylactic powers of vaccination, is a blot upon the civilization of the age in which we live

A frightful comment upon man's ingratitude to Jenner, and disregard of Jenner's teachings, is that of Gloucester, as published in London *Lancet* and copied in the New York *Medical Record*, May 2, 1896, p 634 The *Record* says

"It is extraordinary to note how at Gloucester, a town in which Edward Jenner resided for years, this centenary year of the discovery of vaccination is being kept First, we find a board of guardians in fair weather, when there was no small pox about, declaring themselves boastingly to be opposed to vaccination, then, frightened at their own mischievous default, first recommending vaccination to the public by means of circulars, and later, when still more frightened, actually turning right about face on all their former boasts and resolves and deciding to enforce the compulsory clauses of the vaccination acts Secondly, we find that their experience—just one hundred years too late—has been most bitterly bought, for, according to last week's papers, out of ninety deaths from smallpox in the hospital (there have been 118 in all the city) seventy four were of unvaccinated persons Thirdly, we find that among this community which has so long been misled by the guardians, there have within a few weeks been some 700 cases of smallpox, and that in the absence of any controlling vaccination the disease has seized that part of the town where the sanitary conditions are by no means worst, but where there was an undue proportion of unfortunate children who were unvaccinated Fourthly, we find some thousands of pounds being spent in attempts to check smallpox by hospitals, quarantining and disinfection, but all in vain, for the disease goes on multiplying just the same, indeed, there were no less than 172 fresh cases last week And, fifthly, we find that even some of those most responsible for the terrible loss of life among the unvaccinated are hurrying to get protection by vaccination for themselves We leave those who have been so grievously injured by disease, maiming and death, to apportion the blame Here we only note with regret and shame that any British city, and above all Gloucester, should be in the state in which that city finds itself in the centenary year of Edward Jenner "

The New York *Medical Record*, April 25, through its London correspondent, shows that only one revaccinated person has been admitted into the hospital She had undergone smallpox inoculation fourteen years previously and now contracted small pox while nursing patients ill of the disease

Last week's medical journals state that the smallpox epidemic in Gloucester continues to reap its fearful harvest of unnecessary sickness and death from this, when uncontrolled by vaccination, king of fatal diseases

What a confirmation of the truth of the old adage, "Whom the gods would destroy they first make mad "

I give you two cases in contrast with Gloucester

Take London, ten or twenty times more populous than Gloucester During the year 1895 there were but fifty five deaths from smallpox in London

Take the German army *In a report recently made to the* Reichstag concerning the decline of disease in the German army, it was shown that from 1873 to 1896 (twenty three years) there had been but two deaths from smallpox in the thoroughly revaccinated army of the empire These facts carry their own comment

In this day when we hear so much of degenerated health from vaccinaton, and not infrequently death, when we hear so much of degenerated lymph, let us remember that the main trouble lies in degenerated practice relating to vaccination

Let every physician arouse *from the slumber of neglect of* this important measure, cease to regard it as one of the lost arts realize that it is a living moving reality, which when rightly practiced and extended shall carry health long life and happiness in its train Let him pledge himself here and now to enter with renewed zeal upon the high duty of enlightening the public so grievously ignorant of or indifferent to the prophylactic power of vaccination Let him who is unacquainted with the appearance and phenomena of the typical vaccin disease lose no time in its study, and then from the unpretentious husbandman who, in raising wheat and other grain, selects the finest specimens as seed from which to gather from a fruitful soil an abundant harvest, learn to select the most typical vaccin vesicles from the most healthful subjects and in good ground sow the seeds of cowpox—a disease which if universally inoculated, and repeated at necessary intervals, would banish from the face of the earth one of the most loathsome and fatal diseases known to man

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[50] Transactions American Medical Association 1865, p 219

On this Centennial celebration of the discovery of vaccination I close this paper with the following quotation from John Simon of Great Britain, for many years the honored medical officer of the local government Board of that nation

"It can be no common certainty which commands so general an assent It can have been neither a truthless nor a barren doctrine, which, within sixty years from its rise, has all but universally satisfied private judgment, and has converted nations to its grateful followers

"No truth can be thought of, against which some one does not rail, and it would be idle to hope, under existing conditions of the human mind, that vaccination should be much more generally credited than it is

"Perhaps in no age of the world have persons, in proportion to their instruction, been readier than now to accept physical marvels, and to modify their conceptions of natural laws, at the biddings of quacks and conjurers It goes with this credulity to be incredulous of proved truth Alike in respecting what is known, and believing what is preposterous, the rights of private foolishness asserts themselves It is but the same impotence of judgment, which shrinks from embracing what is real, and lavishes itself upon clouds of fiction

"To some extent, therefore, it may be felt a weary and unprofitable work to have spent time and labor in reasserting proofs which, fifty years ago, were exhaustive of the subject"

'They have enabled you to estimate the full measure of gratitude which is due to the discoverer of vaccination They have set before you, as experience, what it must have seemed mere enthusiasm to foretell You will read it in the skilled evidence of individuals, who, solely with the resources of Jenner's antidote, are maintaining day by day against the most dreadful of infections the victory which he commenced You will read it in the colossal statistics of nations, which till sixty (now ninety six) years ago were decimated by that one messenger of death

"If utility to human life be any test of what is noble in labor, if our teachers of inductive philosophy have rightly advised us, *non tantum et ordini, verum etiam usui et commodis hominum consulere*—then assuredly the discovery, of which those things are told, may rank with any achievement of man

"'Let men rejoice that there has shone so great a splendor from amid their race,' is the bidding which at Newton's tomb minds us of immortal debts to the greatest interpreter of na ure, and claims kindred for us with the power of his intellect, ssionless and 'almost divine' If corresponding honor be due the most beneficent application of science, if our mortal state ves love to those who lessen its weakness and misery, surely ere has been a second student of nature, who, also matchless his career, might have claimed to lie beside that monarch of the intellect in his last repose, and to share the inadequate homage of that grateful epitaph

"For, though a different, it is an equal praise, which the members of Jenner's profession vindicate for his honored name He, too, could interpret nature, but above all, he could render her teaching fruitful To arm mankind against the worst of pestilences, to widen by one discovery the horizon of human life, to banish a cruel terror from every mother's heart—such was Jenner's aspiration in his study of nature, such has been the fruit of his philosophy"

SOCIETY PROCEEDINGS

Chicago Academy of Medicine

The regular meeting of the Academy was held Oct 15, 1896

(Concluded from page 960)

MENTAL ASPECTS OF INFANTILE PARALYSIS

Dr H B C **Alexander**—The mental symptoms arising in connection with infantile paralysis vary in type with the constitutional disturbance accompanying the paralysis The most frequent permanent disorders occur in the cerebral paralyses where conditions of more or less grave imbecility are found accompanied very often with epilepsy German and American statistics show that this occurs in at least 35 per cent of diplegiacs, and 60 per cent of paraplegiacs, while but 13 per cent of hemiplegiacs are mentally affected In many instances this mental disorder coexists with a gibbous sclerosis which seems to be the underlying lesion of the mental defect In cases where epilepsy exists the usual epileptic psychoses occur The mental state may vary in these chronic cases from slight stupor to grave mental deterioration In many instances the mental defect appears only in moral expression Not a few of these children are incapable of learning the ordinary relations of *meum* and *tuum* The epileptic mental disorders are notoriously aggravated by bromids Under these, motor phenomena disappear to give way to disagreeable mental and moral manifestations The influence of the gradual progressing mental disorder is excellently illustrated by a case which came under my observation The patient came from a neurotic family and suffered from suppurative otitis media secondary to scarlatina, this resulted in complete facial paralysis of the right side During infancy and childhood there were frequent attacks of melancholia with decided suicidal tendencies At 17 she cut her throat in an attempt at suicide and was admitted to the Insane Hospital She was much depressed, very suicidal, in constant terror and trying to escape from the ward every time a door was opened When she first came under my care in 1885, some years after her admission to the hospital, she seemed partially demented, with little intelligence or memory, very untidy in habits Physically she was well nourished and healthy There were at that time no marked suicidal tendencies, but the habit of struggling to escape from the ward each time the door was opened still remained and made her a most troublesome patient There were never signs of disappointment at a failure The effort seemed an uncontrollable impulse, the result of an old mental habit September, 1884 she pulled down from the top a dining room window, climbed over the lower sash, before she could be stopped, and fell from the third story The shock was considerable, but she did not lose consciousness A comminuted fracture of the shaft of the left femur was discovered, and the limb was soon placed in a fracture box and a Buck's extension applied Very little stimulant was given After the first twelve hours the temperature gradually rose to 101 She was very quiet, seemed dazed and frightened for several days The temperature gradually fell to normal and six days after the accident marked mental improvement was noticed She was bright and cheerful, talked of her past life, inquired for her friends, showed a good memory for past events, and was quite tidy in her habits The bone united quickly, and in two months the patient was able to walk about and apparently quite restored mentally, was allowed to go home, but was very soon returned to the hospital in a condition similar to that before the accident and has remained so since In this case the mental depression probably masked the dementia existing from the first and with the subsidence of the emotional state the dementia became more apparent and progressed with a gradually developing cortical change The acute disorders occurring in connection with the infantile paralysis may vary from simple melancholia, which is quite frequent but temporary in duration, to acute mania, much more rarely acute confusional insanity, which is quite frequent but often called coma Imperative conceptions often occur in these cases and are stimulated by injudicious humoring into positive delusions

FORENSIC ASPECT OF INFANTILE PARALYSIS

Dr Harold N **Moyer**—There is comparatively little to be said on this subject The forensic aspects are only those that pertain to obstetrics It is possible that a suit for malpractice might have its origin in infantile paralysis which developed subsequent to birth There are none such recorded, so far as I know, and it would seem to be difficult to fix any degree of responsibility on a physician for a condition, so obviously dependent upon diseased states, and not upon negligence of the practitioner

As regards infantile paralysis which develops prior to, or after birth, the question is different The necessary manipulations during delivery of the child, instrumental or otherwise, may be very easily brought forth as a cause of the paralysis which follows, whether they have a bearing on it or not As Dr Paddock has said, obstetric manipulations may cause paralytic phenomena The question of the law would be as to whether due care and diligence had been exercised in carrying out such manipulations There is, however, a practical and important point relating to the jurisprudence of such cases In all ordinary surgical operations that are performed on adults an action must lie within two years from the time the negligence is said to have taken place, otherwise it lapses by the statute of limitation, and no action can be had If the paralysis has occurred in infancy, a suit may be brought in the case of a male child at a period as late as 23 years, that is, two years after majority, and in the case of a female chile, it would be 20 years There are quite a number of cases on record in which physicians have had such suits brought against them I recall one case in which a suit was brought against a physician more than 22 years after he had attended a case of confinement, whether the paralysis was congenital or due to obstetric manipulations, I do not know There was paralysis of the arm, which persisted throughout life The man who brought the suit against the physician recovered judgment for not less than five thousand dollars, but on an appeal to a higher court the case was reversed, and whether it was subsequently settled out of court I do not know These cases are important from the fact that actions may be brought long after the witnesses are dead or the facts forgotten by the physician In the forensic aspect of infantile paralyses these cases are not wholly devoid of interest

THERAPEUTIC RELATIONS OF THE PALSIES OF INFANCY

Dr Sanger Brown—In a general consideration of this subject, I will first speak of those palsies due to a lesion of the peripheral neuron, then of those due to a lesion of the central neuron, and lastly of those due to a lesion of both neurons It may not be out of place to state that by the central neuron I mean the nerve cell or unit whose body is in the cerebrum and whose axis cylinder process passes downward to end in an arborization or brush surmounting the body of a peripheral neuron, either in the medulla oblongata or in the anterior horn of the spinal cord By the peripheral neuron I mean the nerve cell or unit, the body of which lies in any of the nuclei in the medulla oblongata or the anterior horn of the spinal cord and passes thence by the several nerve trunks to the various muscles So far I have only spoken of the motor neuron, both for the sake of clearness and because the relations of the sensory neurons are not so well understood, nor are they so intimately concerned with our subject The advantage of discussing the question according to this natural division appears when it is stated that the symptoms due to lesion of the central neuron are very different from those due to lesion of the peripheral neuron, that is to say, generally in the former case there is exaltation of the reflexes or a spastic condition without atrophy, and in the latter diminution or loss of the reflexes with atrophy And further, no matter upon what part of the respective neurons the lesion may act, the relation of the several symptoms to each other holds as above stated

Therapeutic measures should be directed in the first place, as far as possible, to the lesion producing the paralysis, and, secondly, to the restoration of the injured neuron upon which the paralysis depends Incidentally the nutrition of the paralyzed parts should receive prompt and careful attention in anticipation of the partial or complete ultimate recovery of the neurons concerned, and, finally, any tendency to deformity should be met without delay by suitable surgical and orthopedic devices

I will now proceed to mention some of the peripheral palsies commonly met with in early infancy and childhood, commencing with the

Obstetric palsies—During the process of delivery the fingers of the accoucheur may be so firmly pressed into the axilla of the infant as to injure one or more of the nerve trunks of the brachial plexus, thus causing a corresponding paralysis of the arm In a similar manner the trunk of the facial may be injured by the blade of delivery forceps In a case of this kind no active treatment could be employed for two or three weeks at least, and in the meantime the paralyzed parts may be bathed as the other parts are, care being exercised in handling the ailing arm, which may be kept wrapped in absorbent cotton After two or three weeks, light massage and gentle movements are indicated Prior to the fifth week, young children's muscles do not respond to any but very strong electric currents and so this agent can not be used here No medication is required and the prognosis is good

Facial palsy—In the child, as in the adult, the seventh nerve may suffer from extension of disease from the middle ear or brain, but I need here only mention that from which, in children at least, almost always results from exposure to a draft and develops very rapidly the so called rheumatic neuritis Such cases usually recover in from two to twelve months, whether treated or not It is difficult to demonstrate the utility of blisters, cups or leeches, applied over the mastoid process, though the practice is pretty firmly established and usually does no harm Many patients demand electricity in some form, and both practical and theoretic considerations warrant its use though in my opinion its direct value is not great About ten days after the onset the patient may sit upon a flat electrode, four to six inches square, while a small electrode is moved slowly from the mastoid process along over the main divisions of the nerve, using a current of from four to seven milliamperes The applications should be made three times a week and last ten minutes Either pole may be used, but slow interruptions should be made

Multiple neuritis—A distinction ought to be made between an inflammatory process acting upon the nervous elements of the trunk of a mixed nerve and a toxic or toxemic process acting upon the bodies or nuclei of these elements In the former case there is always tenderness of the nerve trunk at the seat of inflammation, and motor and sensory disturbance limited to the distribution of the respective nerve or nerves In the latter case there will be no increased tenderness of nerve trunks, there will often be observed considerable motor paralysis with little or no disturbance of sensation, and when sensory symptoms are present they are not limited to the distribution of particular nerves Though actual multiple neuritis sometimes occurs in children, if the peripheral palsies are classified in accordance with the foregoing considerations it will be found to be quite rare, while the non inflammatory degenerative forms due to the influence of a poison acting upon the body or nucleus of the peripheral neuron are very frequent The symptoms of multiple neuritis are usually active and more or less progressive for from four to eight weeks, after which they slowly decline During the advance of the disease pain is a very prominent symptom, and to relieve this, maintain the strength of the patient, neutralize or eliminate any causative influence, and if possible diminish the inflammatory process, are the main objects of therapy Where such causes as lead, malaria or alcohol are suspected, the appropriate treatment is obvious For the relief of pain heat is often of service and if hot water is employed caution is necessary to prevent the formation of blisters, for it often happens that the sensation is so much reduced that the patient can not be depended upon to make the usual protest On account of the impaired nervous force ulcers form easily and heal badly In many cases it answers well to swathe the limbs liberally in absorbent cotton, confined with a loose bandage Opiates should be used sparingly, that is, not regularly, for otherwise the pain remaining urgent so many weeks, too free use of this drug may have the effect of intensifying the symptoms when, however pain prevents sleep, morphia sulphate or codeia phosphate, hypodermically, will be found the best hypnotic After the first few weeks, when the pain has somewhat subsided and paralysis and atrophy are easily seen, daily applications of galvanism, from 5 to 15 milliamperes, should be made, and as soon as it can be borne, light massage and passive movements may be commenced It may happen that orthopedic apparatus or even tenotomy may have to be employed to prevent or overcome contractures

Parenchymatous degenerations—Of the parenchymatous degenerations of the peripheral neuron, due probably to the action of a toxic or toxemic influence on the nucleus, lead palsy and diphtheritic palsy may be taken as types After proper measures have been directed against the cause, paralysis and atrophy may be treated as a multiple neuritis, but a more speedy recovery and satisfactory recovery may be expected If it is a fact, as many authorities assert, that in diphtheria the knee jerks are always lost, and that this loss is due to the action of the specific toxin on the nucleus of the peripheral motor neuron, then in every case of diphtheria, strictly speaking, there is diphtheritic paralysis, that is to say, the nutrition and function of the peripheral motor neuron is impaired, and it is only a question of degree between the cases in which muscular weakness is or is not very apparent According to what I have just said, if the claims made for the influence of antitoxin are correct, this substance must act specifically against the development of diphtheritic paralysis I do not recall any published clinic observations on this point

Acute anterior poliomyelitis—This disease is essentially an acute exudative inflammation, affecting chiefly the anterior horns of the spinal cord in the lumbar and cervical enlargements, hence the paralysis is due to injury or destruction of the peripheral motor neurons whose nutritive centers are there situated The therapeutic indications are, in the first place, to limit as far as possible the inflammatory process, and thus spare the neuron, and, secondly, as in all the other palsies due to a lesion affecting the peripheral neuron, to restore such of these elements as have not been destroyed and maintain by artificial means the nutrition of the muscles over which the diseased neuron is in the meantime unable properly to preside Though the symptoms usually develop rapidly—often in a few hours—it is fair to assume that just in proportion as the inflammatory process is checked will the number of neurons which will ultimately recover escape During this stage the patient in order to promote the circulation [illegible] ould rest either on the side or abdomen, [illegible] old applications alternately made to the sp [illegible] he seat of inflammation for half an hour, then a hot water bag for half an hour, and then neither for an hour, and so on, and, indeed, I consider it rational to continue this kind of treatment for from a week to ten days after the inflammatory process has probably reached its height At the outset it is well to give one tenth gr of calomel every hour till the bowels and kidneys respond, and this may be repeated after three or four days if there are no contraindications During this stage the diet should be light, and fever if possible should be treated by palliative remedies For convulsions full doses of chloral per rectum are recommended After the inflammation has subsided, potassium iodid in doses that will not disturb the digestion may be given for two or three months in the hope that it may promote absorption of the exudate The second indication of treatment is met by the application of electricity, bathing, massage and orthopedics, as already indicated, but here permanent paralysis and atrophy are more likely to remain than in any of the palsies heretofore spoken of Under judicious treatment, however, improvement may continue two or three years after the symptoms have reached their climax, and this fact warrants a corresponding persistence in the treatment The explanation commonly advanced for this prolonged period of improvement is that each muscle is supplied by neurons which are distributed in the anterior horn transversely for an inch or more, and some of them therefore escape complete destruction and require from two to three years to reach their limit of recovery and development

Paralysis due to lesion of the central neuron, infantile cerebral palsy, spastic hemiplegia, diplegia and paraplegia —These palsies are associated with spasm without actual atrophy The causative brain lesion may occur *in utero*, or as a result of prolonged difficult labor, or from various causes after birth The causes which operate after birth are often obscure, and authorities differ much in regard to them There is a general agreement, however, that the lesion is nearly always cortical, while in the adult it is in the majority of cases in the interior part of the brain In the child convulsions and coma are usually prominent symptoms of the onset and though treatment during this period is of great importance, time does not permit me to discuss it, nor will I attempt to discuss the epileptic convulsions and mental defects which commonly accompany the infantile cerebral palsies, excepting that these children often have a deficient circulation which is assisted by frictions and passive movements of the limbs After the brain lesion has become stationary, such measures as have been recommended in the palsies due to lesion of the peripheral neuron are of little or no avail in effecting an improvement and, indeed, often aggravate the symptoms by eliminating the pathologically excited peripheral neuron to increased activity Surgery has of late shown brilliant results in relieving the spasm and contractures which are often such a distressing accompaniment of these palsies I have already taken up too much time and can not consider many important palsies of childhood which yet remain, particularly, for example, those due to a lesion of both the peripheral and central neuron, as transverse myelitis, but I shall feel very well satisfied if I have succeeded in drawing attention to the essential physiologic difference between the functions of the peripheral and central neuron and the corresponding variations in the symptoms due to a lesion of each with the general principles of rational and appropriate treatment

SURGICAL AND ORTHOPEDIC ASPECT OF INFANTILE PARALYSIS

Dr F S Coolidge—In discussing this subject, I shall speak from the standpoint of personal experience The cases of this nature coming to the orthopedist are divided into two groups 1, the cerebral paralyses, of which hemiplegia and spastic paraplegia form the major part, 2, the spinal paralyses, which, if we throw out the paralyses of Pott's disease, consist mainly of anterior poliomyelitis I shall only have time to speak of the main forms of infantile paralyses There is a great difference between the two groups In the paralyses of cerebral origin the affected muscles become the seat of spastic contractions Any slight irritation causes an involuntary contraction Any effort to use even one of these muscles causes a contraction of them all These incessant contractions result in shortening the bellies of the muscles and stretching the tendons On the whole, the muscles are shortened and contraction deformities finally occur In the cases of anterior poliomyelitis the affected muscles are paralyzed, become limp and loose, the "sleeping paralysis" of the Germans Flexions and deformities occur because the healthy muscles, pulling the member over to their side by their normal tenacity, meet with no opposition and become structurally shortened

In the cerebral spastic paralyses, contraction of the affected muscles causes deformity In anterior poliomyelitis contraction of the healthy muscles causes deformity

The mechanical treatment of the spastic cases is rather unsatisfactory There is always present some mental impairment, varying from a slight amount to complete idiocy Furthermore, the difficulty is generally not the lack of power, for it is usually a paresis rather than a paralysis, but in the involuntary spasm of all the affected muscles This in the severer cases renders a single act, as of placing one foot in front of the other, impossible, and causes a stiffening and extension of the entire legs with every muscular effort To add the weight of a brace to legs already uncontrollable is, of course absurd

Until recently little of advantage was accomplished by surgery A few years ago, however, it was found that cutting the tendo Achillis caused a wide separation of the cut ends, and that when the gap was closed the spastic condition of the calf muscles entirely disappeared The strength of the muscles was possibly diminished somewhat, but they were placed under the control of the brain I have never seen any plausible explanation of this remarkable fact, but have proved it in many cases In none has the spastic condition returned That the same is true of all the other muscles I have no doubt, except that the spastic condition does return in them occasionally If we could cut all the tendons of the legs in a spastic paraplegia the spastic condition would disappear and the limbs would become controllable Many of the tendons can be cut, and following the lead of Dr Bradford, I have repeatedly cut the tendons of the adductors at the pubis, the internal and external hamstring groups and the tendo Achillis in both legs This, together with massage and passive motion and teaching the child its newly found power of coordinate movement, has done a great deal, and has placed upon their feet children who had hitherto been helpless Unquestionably the spastic condition in some cases returns in the course of years, but this may be partly due to the fact that not all the muscles can be reached Noticing also that the spasm exists in the anterior thigh muscles, from the fact that frequently the patellæ are drawn up quite an inch, and that the belly of the quadriceps extensor is markedly high up, making what might be called a "ligamentum patellæ superius" I recently elongated this tendon an inch by cutting down, lengthening and suturing it, in addition to cutting all the other tendons above named As this is, as far as I know, an original operation, I am watching the result with great interest There is certainly decidedly less spasm in that leg than in its fellow, which I treated similarly, except for the elongation of the large extensor tendon The child, who is 7 years old and never even stood alone, can now place one foot in front of the other quite definitely and walks with a hand supporting him

The orthopedic treatment of the second group, anterior poliomyelitis, is of great importance Early in the disease the limbs should be massaged and given passive motion, and if the paralysis remains complete for some time light suitable dressings should be used, holding the limbs in the normal position to prevent the formation of contraction deformities This simple rule is sadly neglected In those groups of muscles in which there is slight power remaining, exercise and training can yield considerable strength Those groups of muscles in which the paralysis remains complete after a few months never regain any power

As soon as the line of demarkation is drawn between the totally paralyzed muscles and those which can be improved, it becomes necessary to apply some form of apparatus which will give the best possible use to the limb But it is a hard task to perform, for in such limbs the circulation is extremely poor, the skin bruises easily and sores form easily To fulfill all the indications, and yet guard against sores and discomfort, calls for long, patient, skillful effort

With reference to the surgical treatment of this group, existing deformities should be corrected by tenotomies or forcible stretching before any brace can be applied I had intended speaking of transplantation of tendons, suturing tendons of healthy muscles to the tendons of paralyzed muscles, thus making the healthy ones do the work of both, and also of stiffening the joints by partial resection, so as to yield a stiff bony support rather than a useless flail jointed leg, but will leave this for Dr Beck to discuss

CEREBRO SURGICAL RELATIONS IN INFANTILE PARALYSIS

Dr A E Halstead—In the consideration of the treatment of infantile cerebral paralysis, by operative measures on the brain, it is essential, first, to briefly review the etiology and pathologic anatomy of these conditions

Etiologically we have three groups *First*, those in which the conception of this condition precedes birth In this group we have as the most frequent causes

a An arrest of development of a part or a whole of the brain This arrest may be due to heredity, congenital syphilis or to any other condition that interferes with the circulation of the blood of the brain during early fetal life An examination of the brain of these cases shows an absence or a partial development of one or more convolutions or at times of a whole hemisphere In such cases we have idiocy associated with paralysis of one or more of the extremities, depending upon the location and extent of the brain lesion

b Intrauterine infections give rise to circumscribed or diffuse meningo encephalitis, this in turn being followed by the formation of new connective tissues and later by atrophy and degeneration of the brain tissue Frequently we have thrombosis of the cerebral vessels as a result of this infection, which later gives rise to circumscribed softenings and to the formation of cysts

c Trauma to the mother during pregnancy is infrequently the cause of congenital cerebral paralysis Two of such cases are on record, First that of Gibbs, in which the mother received a blow on the abdomen at the sixth month of pregnancy The child was born at full term with a right hemiplegia and died at the end of a month Autopsy showed a subdural clot covering the motor area on the left side The second was Cotard's case, which was similar to the preceding, excepting that the child was stillborn and had contractures and atrophy of the extremities on the left side Autopsy showed clot over the right hemisphere

In the *second* group we have those paralyses which result from injuries received during birth The most frequent result of this injury is a meningeal hemorrhage Occasionally the hemorrhage is into the substance of the brain In a few cases a depressed skull fracture is followed by brain symptoms Chronic meningeo encephalitis with sclerosis, atrophy and the formation of cysts are the constant results of these meningeal hemorrhages

In group *three*, those in which the paralyses develop after birth, we have as the cause, first, intracranial infections occurring during the course of the acute infectious diseases of childhood, such as measles, scarlet fever, whoopingcough, etc

The pathologic conditions found in the brain in these cases are the same as those found in the cases where the infection has occurred during intrauterine life, viz , sclerosis, atrophy and adhesions between meninges and brain, and skull and meninges

We also have in this group as the cause of paralysis, trauma received during the early years of life This may be either a depressed fracture or a hemorrhage The pathologic conditions following are the same as those that follow similar lesions that occur in adult life, excepting an arrest of development of the brain commonly follows in children In the treatment of cerebral paralysis we must consider not only the palsy, but also those conditions which so frequently follow or accompany it, namely, epilepsy, chorea and mental defects

In the first group, cases of cerebral agenesis are not amenable to surgical treatment In those cases in which we have hemorrhage as a result of intrauterine trauma, if the child lives and the symptoms are such that the lesion can be localized, trephining and removal of the clot are indicated These conditions are rarely present

Where we have intrauterine infection as the primary cause of paralysis, the brain symptoms are more frequently the result of arrest of development than of the primary lesion In those cases in which sclerosis and adhesions follow the infection, removal of the sclerosed tissue, if not too extensive, at times is followed by improvement of the epilepsy or chorea, but has no effect on the paralysis other than to make it more complete

When the paralysis is due to injuries received during birth, it should be treated immediately by operative measures

If the brain symptoms (paralysis, paresis or spasms) be the result of a depressed fracture, the fragment should be elevated at once If no fracture be apparent the lesion is probably a meningeal hemorrhage, and should be treated by trephining and removal of the clot If these conditions are not treated immediately after birth atrophy and sclerosis with secondary degeneration quickly follow and render operative treatment useless If the operation is performed early these secondary changes do not take place

In the third group, where the paralysis is due to meningeo encephalitis, secondary changes take place rapidly and are such that operative measures on the brain can benefit the patient but little In those cases that are followed by the formation of cysts, either from thrombosis, embolism or softening of circumscribed areas, opening the skull and evacuating and draining the cysts frequently produce favorable changes in the epileptiform, athetoid or choreiform movements that so often accompany cerebral palsies, but does not benefit paralysis or mental defects

In any one of these groups, the paralysis may assume the form of a diplegia or a paraplegia, in which case the lesion is too diffuse to be treated by operations on the brain

ARTHRODESIS IN INFANTILE PARALYSIS

Dr Carl Beck—All that was accomplished in the treatment of infantile paralysis was to enable the patient to hobble about supported by braces or heavy apparatus During the last few years, particularly on the recommendation of Karewski, attempts have been made to treat these cases surgically This departure has proven so successful that many unfortunate patients prefer operation to wearing heavy support braces The operation, which is called arthrodesis, consists essentially in the destruction of a joint, producing anchylosis, or at least very restricted movement The following case affords so good an illustration of the usefulness of the operation that I will describe it in detail, concluding with an enumeration of the indications and contraindications

D D , 15 years of age, was admitted to the Cook County Hospital for the purpose of securing a supporting brace for her paralyzed limb Up to the age of 4 years she was a perfectly healthy child , she then became sick with the symptoms of acute poliomyelitis, which resulted in paralysis of both limbs After about one year's treatment with electricity, massage and other methods, she improved so much as to be able to use her left lower extremity, while the right leg remained paralyzed, except that the adductors and the psoas muscle could be used to a certain degree, enough to allow her to throw the leg forward and inward, but she was never able to make any firm, premeditated movement Extensive passive movements could be made, the leg could be placed around the neck or extended backward to bring the sole in contact with the head While the patient was walking on crutches the leg would swing like a flail During the following years it did not improve in the slightest degree, but became atrophic and slightly flexed She was obliged to use a crutch all the time The changes in the pelvis and vertebral column that are usual to cases of infantile paralysis, *i e* , scoliosis and incongruity of the pelvis, developed in this case also It was in this condition that the young girl, who was very bright and otherwise well developed, came under observation The case seemed to be a suitable one for treatment by operation inasmuch as the slight but persistent action of the adductors and flexors allowed of the patient's throwing the limb forward In order to convince myself that she would be able to walk on a stiff leg the limb was put in a plaster of paris cast The slight contracture caused a good deal of pain when the limb was straightened, but she could, nevertheless, walk with the aid of a crutch This being satisfactory I decided to make the limb permanently stiff On Nov 16, 1895 the operation of arthrectomy of the knee joint was performed In consequence of the long standing contracture the bones had become deformed, and in order to have the limb perfectly straight it was necessary to remove quite a portion of the condyles anteriorly Otherwise the operation was a typical resection The result was excellent Four weeks after the operation the leg was put in a water glass bandage, so that the patient might walk in this very light dressing, and six weeks after the operation she was discharged with a high shoe The operation which I first thought of performing on her ankle joint was unnecessary, as she could walk firmly with her anchylosed knee This patient was exhibited at a meeting of the Chicago Medical Society January 20 She was then able to walk without support for the first time in eleven years

Since that time I have had occasion to observe several other cases, but the time which has elapsed since treatment is too short to permit me to make a report From this one case, however, I have gained the conviction that arthrodesis is a justifiable and very useful operation by which patients are enabled to use their limbs without the aid of crutches or braces The indications, however, are very restricted, since experience teaches that by careful and untiring care many cases of infantile paralysis improve so greatly in the course of time that the muscles acquire some activity In a case like this, however, where no change for the better had taken place in eleven years it could not be expected that treatment would enable the child to recover the use of the limb Furthermore the small groups of muscles, adductors and psoas, unless trained become atrophic and it would not have been possible for the limb to be thrown forward had not her intelligence led her to practice the movement and preserve the muscles As a first indication I would say that the operation should be done only after all hope is abandoned that the limb will become useful by the return of muscular action Another condition is that power must be preserved in some muscles at least, otherwise the stiffness of the knee and ankle will be of no [illegible]ntage [illegible]r tunately in most cases such a degree of muscular power is retained

This method can be used in cases where the feet alone are paralyzed In such cases Karewski and others have had good results in both limbs by producing anchylosis, which, however, gradually yielded to restricted motion, motion at a small angle, so that patients were able to walk firmly on their feet without braces The operation would be contraindicated shortly after an acute attack of poliomyelitis

The literature on this subject is already quite extensive, a number of cases having been operated upon in France Germany and this country The results are uniformly good Thus, Karasiewicz reports among eighty seven cases eighty four satisfactory results When we think that many of these wretched children are not able to buy good braces, or to keep them in order, but are obliged to hobble about on crutches all their lives, developing contractures decubitus and deformities of the pelvis and spine, we must admit that this operation has proven a godsend in the treatment of infantile paralysis and that it deserves to be placed on the same level with other plastic operations The object is not to restore form, but to restore the function (*la chose la plus principale pour la classe ouvriere* —Verneuil) and make the unfortunates useful members of society

While I was on the Continent this summer I asked different surgeons how many craniectomies they had done, and what kind of results they obtained In France, where craniectomy was first done quite extensively, it has been entirely abandoned Lannelongue, who was the first to do the operation in France, has given it up His results were not good enough to justify the operation In Germany the operation has never been done to any great extent, and, as far as I could learn, only one or two operations have been performed In Italy very few craniectomies are done For the last three years I have not resorted to the operation myself

After looking at Dr Engelmann's specimen, I should say that a craniectomy would have been useless in such a case, because there is not simply a pathologic condition of the brain but the entire nervous system shows lack of development The nerves and spinal cord are very small, and the case was undoubtedly one of micromyelia and microcephalia There is defective development of the finest elements of the brain But there are cases where craniectomy may be of some use The post mortem of a case which I saw not long since showed me plainly that I ought to have performed a craniectomy, which might have been a great benefit to the patient

As to the surgical treatment of anterior poliomyelitis, as Dr Coolidge has said, orthopedic treatment in some of these cases does not yield good results This is particularly true where we have to deal with poor and badly treated children, whose parents can not afford to buy an apparatus, and who can not keep the apparatus in good condition if they had it Such children are neglected

CRANIECTOMY AND MENTAL SYMPTOMS

Dr James G Kiernan—From an alienistic standpoint it has long been decided that in the majority of cases the results following craniectomy were negative It had at one time some support from the standpoint of the alienist, owing to the fact that cases would occur of this character, for example, one of the popes sprang from a family of which the majority were rather below the average mental standard than above it, in point of fact, idiots preponderated, and he himself was not intellectually of high order until he fell downstairs one day and sustained a fracture of the skull From that time on he began to improve mentally and became somewhat renowned for shrewdness as a church politician Such cases as this appeared from time to time in the literature It was also noted in a few instances in autopsies made at insane hospitals, that there were some cases in which there had previously been skull pressure interfering with brain growth

In another set of cases, and these were the vast majority, the influence of the premature closure of sutures could be entirely excluded in idiocy This would appear to me to be the fact in the case reported by Dr Rosa Engelmann The atrophy in this case is more than pathologic I should be of the opinion that the condition was teratologic as well as pathologic and that the pathologic condition was secondary to the teratologic changes From this standpoint, it would seem that craniectomy would be at best useless A factor which must be considered in dealing with any apparent improvement, is the constitutional effect of an operation *per se* irrespective of its character or location This has long been recognized by alienists and is now being considered by surgeons The influence of this factor is strikingly illustrated in the case reported by Dr Harriet C B Alexander Alienists have noticed from time to time that traumatism or even pathologic states will produce temporary improvement in old cases of insanity

With reference to some of the etiologic factors, it should be remembered, as Dr Baum remarks, that there are a good many conditions reported as scleroses, so called miliary scleroses, which can be produced on the brain of any healthy dog by the operation of alcohol In 1882 Dr Bottcher of Saxony, made investigations on the children of women who worked in the potteries as to the influence of lead poisoning on the mother, because most of these women potters were then subject to lead poisoning His results which were very valuable, were published in several neurologic journals In a large number of cases the women bore large headed children, so called microcephalic idiots, in which the normal cerebral tissue was replaced by barren ependyma tissue He found a large number of children, apparently healthy at birth, who later presented conditions similar to those cited by Dr Brower as occurring in family paralyses The autopsies in some cases showed the condition present, which was found in 1887 by Spitzka, and subsequently by others, to be a family tendency to miliary aneurysms There was a tendency in a number of generations (in the family that Spitzka studied) to this It seems to me, miliary aneurysms would throw some light on the phenomena observed by Dr Brower The child would have first the arterial condition predisposing to miliary aneurysm and subsequently aneurysm would develop which, either by rupture or by pressure, gave rise to the various conditions found in this class of cases This condition would also to a certain extent explain the phenomena of diffuseness, of certain cerebral lesions in diplegics and paraplegics, to which Dr Brown has called attention This diffuseness of lesions bears directly on one point brought out in the discussion of the mental symptoms The hemiplegic condition is generally due to localized lesions while the other conditions are generally due to diffuse

With regard to etiology, it is well known that most contagious diseases produce a secondary pathologic state closely allied to the luetic state As Dr Baum has said, physicians are apt to err, on the one hand by considering certain conditions occurring in luetics as the result of lues, while on the other hand, they are liable to regard the reaction to alteratives as an evidence of lues Certain diathetic states, such as gout, will react favorably to potassium of iodid Furthermore, it should be remembered in the same connection that when Hutchinson made the claim that the so called Hutchinson teeth were due to lues, it was not as positive as many of his co laborers have made it He admitted that in 10 or 20 per cent of the cases where notched teeth were found, no positive evidence of either lues in the ancestors or in the patient himself could be detected That is one important factor we have to consider in connection with the etiology of infantile paralyses It would seem that almost all contagious diseases have a tendency to produce a sclerotic state Researches have shown that scarlatina and typhoid fever will do it and herein is an explanation of the characteristic results of those conditions in producing these paralyses

Dr Halstead has alluded to the question of exsecting sclerotic masses Exsection in the brain is going to be followed sooner or later by scar tissue I have followed one case reported by a neurologist and surgeon in which one patch was removed from the brain, followed by disappearance of the man's symptoms for two years, after which they returned A second patch was then removed, which resulted again in disappearance of the symptoms, since which the case has disappeared from the literature, whether from the results of a third operation or not, remains unknown

CRANIECTOMY IN INFANTILE PARALYSIS

Dr Alexander Hugh Ferguson—Of all the craniectomies I have done this is the only one that died I assure you that craniectomy has its place in surgery Here was an infant, 7 months old, with constant fits, a history of long tedious labor and of delivery by forceps The craniectomy in this case was undertaken for the purpose of ameliorating the child's condition and of lessening the fits, doing something better for it than can be done either physiologically or medically I do not intend to report all of my cases to night Some of them will illustrate very well the benefits of craniectomy I think no operation should be condemned until it has been thoroughly tried, particularly in those cases where every other form of treatment has been tried and found useless It is in this class of cases that craniectomy has its exact place in surgery We often get most benefit when least expected In one case, a boy 7 years of age, there was paresis of the right arm with some mental impairment He could only count up to seven Convulsions were frequent We recommended and did a craniectomy on the opposite side He is now able with this arm to throw stones and break windows It is a little over two years since the operation was done The convulsions have been materially increased in number Instead of having a fit once a week, twice a week, etc , he now has a convulsion once in three months or so, depending upon the excitement to which the child has been subjected However, the boy is very much improved, is more easily controlled, which is saying a great deal

Another case was for the effects of meningitis There was a dragging of both the arm and leg This patient was a marvel in figures After a craniectomy there was an amelioration of the violent symptoms which he exhibited toward other members (children) of the same family The boy can also walk much better as the arm and leg improved In another case in which craniectomy was performed the result was unsatisfactory In still another operated upon we got no result We declined to operate on another patient, believing that we could not benefit him

A craniectomy was done on a child, 5 years of age, who was unable to stand, walk on talk She was filthy in her habits After the operation she began to improve in temperament and in habits and can now walk On account of the improvement she was brought back for a second craniectomy, which I did four weeks ago, making a horseshoe shaped incision backward and raising the whole roof to see if anything could develop underneath We know that in cases of insanity it is remarkable how they improve with very little brain tissue and then relapse again But if you improve the brain tissue for the time being it is better than can be done with medicine In those children, feeble minded, imbecilic and even idiotic, there is no telling what development and regeneration may take place after craniectomy

Another case of craniectomy was that of a little girl of 3 years of age who had hemiparesis of both the right arm and leg The child was unable to walk had frequent fits and was also a masturbator We did a broad craniectomy in this case , there was a depression of the left side of the head , there was a history of labor and of forceps delivery, but I attributed her condition more to the long and tedious labor than to the application of the forceps Following the operation the fits were under control , she commenced to use the limbs better The improvement was so marked that we did a second operation After the second craniectomy she commenced to talk a little, and I am satisfied that the improvement in this case at the present time is more than could be brought about by resorting to medical treatment, training, etc I claim that the mortality in those cases where the nerve centers are fairly strong is very low The case reported by Dr Engelmann to night is the only one I have lost in twelve operations

RHINO LARYNGOLOGIC ASPECT OF INFANTILE PARALYSIS

Dr **Edward T Dickerman**—What rôle the nose, throat and ear play as an etiologic factor in infantile paralysis is difficult to say No part of the body is more prone to violent infections and to the constant presence of pathogenic factors of infection than the above organs In the acute exanthemata of childhood we have in the nose, throat and ear the most violent mixed infections of the mucous membrane and deeper parts These inflammatory changes may extend into the accessory sinuses and involve the bone itself What is easier than from these various sources of infection to have the process extend along the course of the blood vessels or by the minute lymph channels to the meninges, setting up a local meningo encephalitis with secondary sclerotic changes and accompanying focal symptoms? Another factor to be taken into consideration is the fact that certain toxic elements may first cause a definite disease and secondarily be followed by a paralysis, such as diphtheria Here we may have first the local action determining the position of the paralysis, while later the toxic elements in the blood cause the peri neuritis and neuritis with paralysis It is also undoubtedly a fact that we may have this paralysis and neurotic changes without the local affection This being true, is it asking too much to think that such changes could not occur in the brain itself? In looking over the literature of the subject, which is very meager, I find that as an etiologic factor, which might be traced to the nose and throat,—tonsillitis, diphtheria, measles and scarlet fever,—the reports were not of such a character that one could draw any definite conclusion, and the future will only reveal the exact etiologic rôle that these parts play

ORTHOPEDICS IN INFANTILE SPINAL PARALYSIS

Dr **John Ridlon**—A little more than two years ago, in a paper read before the Chicago Academy of Medicine, I expressed the belief that early orthopedic treatment of infantile paralysis was of the greatest importance The results of my observation and treatment during the past four years have confirmed the belief expressed two years ago I am satisfied now, beyond a question or doubt, that the early orthopedic treatment of these cases will result in a complete recovery in a considerable number of cases that otherwise would become hopeless cripples

The orthopedic treatment of infantile paralysis consists in correcting the deformity, if any deformity exists, by mechanical or operative measures, and in constantly maintaining the limb in the corrected position for a very long period, supplemented by more or less local stimulation to the paralyzed muscles

The choice between the mechanical and the operative methods for the correction of the deformity depends upon the severity and duration of the deformity Speaking broadly, slight and moderately severe deformities should be corrected by mechanical measures severe deformities by operative measures The functional results are undoubtedly better if the deformity is corrected by mechanical measures In recent cases no deformity exists that can not be readily overcome by gentle manipulation The deformity having been overcome, retentive appliances must be carefully adjusted and constantly worn The almost universal failure to cure or materially restore the usefulness of these paralyzed limbs depends more than any other factor upon the fact that the limbs are not constantly maintained in the corrected position Not once during the period of the retentive treatment must the paralyzed limbs be put on the stretch Few physicians and fewer patients and parents have the perseverance to continue the retention without relaxation for eighteen months or more, despite the fact that it is the key note of success in these cases During this long period of retention as full a restoration of the control of the paralyzed muscles takes place as can possibly be had, and structural shortening takes place in the hopelessly paralyzed parts This structural shortening of itself alone is often sufficient to prevent a relapse of the deformity in limbs where whole muscular groups are completely paralyzed

The local stimulation consists in lashing the paralyzed muscles with the looped end of a double strap, in massage, in local roasting either at ordinary atmospheric pressure or in a partial vacuum, and possibly also in the application of electric currents

Chicago Ophthalmological and Otological Society

Regular meeting held April 14, 1896, Dr Gradle in the Chair

There were sixteen members in attendance

Dr Fisher reported two cases of iron in the eye

Case 1 —Mr G aged 37, struck by a piece of iron in the right eye fourteen years ago, which caused immediate blindness He did not work for three months, since which time he has been troubled once a year, the attacks lasting at first about a week but becoming more and more severe every year since The Doctor saw him February 13, 1896 On examination the right eye was found to be atrophic and tender , the left eye V 20—30 , the right eye was enucleated, and on section a piece of iron was found completely encapsulated, the lens being calcareous The piece weighed 2⅛ grains The remarkable part of the case was the large size of the metal, remaining so many years without creating much disturbance

Case 2 —Child, 4 years old Right eye was injured while playing with two hammers on November 9 On November 11 the Doctor first saw the child Vitreous was cloudy , no reflex from the fundus There was a scar in the cornea with a corresponding scar in the iris where the foreign body had penetrated The child was anesthetized and under strict antiseptic precautions a piece of iron was removed with the magnet A small amount of vitreous was lost but no reaction followed In two weeks the globe was filled with pus and the eye eviscerated

Dr Hotz reported a case of a piece of steel in the eye of a boy 12 years of age who on March 1, 1896, was struck in the left eye by a fine chip from a hatchet The chip pierced the center of the cornea and was seen by the family physician lying on the iris Atropin was at once used twice a day On March 4 the boy was brought to Dr Hotz on account of the inflammation which had started up A linear scar 2 millimeters long was seen in the center or the cornea The nasal side of the pupil was fully dilated, the temporal side only slightly On the temporal half of the iris above the horizontal meridian near the pupillary margin was a white, pearl like mass of exudate, from which the foreign body could be seen protruding The lens and vitreous were clear and the tension slightly minus There was some tenderness Extraction was tried with the magnet through an incision made at the upper tem poral junction of the corneal margin, so that an iridectomy could be done upward if necessary A magnet could not pull out the metal and a pair of curved forceps was used The eye recovered quickly, the boy leaving the hospital at the end of four days The lens, however, became cloudy afterward

Dr GRADLE spoke of the secondary results in the lens following injury to the eye, and quoted the case of a girl 4 years of age struck by the blade of a penknife, which cut through the outer quadrant of the left cornea On the third day the iris became slightly entangled in the wound with some exudation at the margin of the wound Atropin and a bandage were used, and recovery occurred after six weeks with the iris adherent to the wound There were some deposits on the capsules of the lens, lace like in character, but the lens substance itself was clear Later the lens substance became opaque

Dr COLEMAN reported the case of a woman, aged 25, complaining of asthenopic symptoms for close work, no trouble at a distance He found the abduction at 20 feet 10 degrees, the adduction 15 degrees, the right eye refraction — 50, the left eye— 50 ⌢—4, ax 180 With the rod test there was esophoria, with the double prism test there was exophoria of 3 degrees For near the adduction was 12 degrees, abduction 18 degrees She has been wearing the correction for some time, but is unable to read longer than three or four minutes Exercise with prisms for four or five weeks without any increase of the adduction at 20 feet A tenotomy of the left external rectus gave the test on the following day of 3 degrees esophoria with the rod and binocular single vision with the red glass This operation was done only a few days ago so that it is too soon to judge of results Dr Hotz suggested that relief might have been given to the patient if the spheres had been left out

C P PINCKARD, Secretary

SELECTIONS

Illinois State Board of Health and Medical Education—Under the proceedings of the Nebraska State Board of Health will be found a report of the investigation made by that board of a case where the applicant for a certificate to practice made an affidavit that he was a graduate of the National Medical College and Hospital of Chicago He had no diploma, claiming that it was granted but held for fees The board never having passed on the standing of this college, made inquiries as to its standing, and facts were brought out that the applicant had attended another school, had failed to pass, had gone to the National Medical College, and in two weeks was graduated The board therefore refused to recognize the school, and the application for a certificate was rejected

The first thing the board did was to ascertain whether the school was recognized by the State Board of Health of Illinois, it naturally being supposed that that board ought to know the standing of schools in its own State Inquiry showed that the Illinois board did recognize the school, and had the Nebraska board not found out the facts referred to it would naturally have supposed the school was straight and would have recognized it as being in good standing It showed on its face that it was, its catalogue and announcements made it appear that it had the full time required and everything that is supposed to be necessary to put a school "in good standing"

That the Illinois board is not what it was in the days of Dr John H Rauch is becoming more and more evident This is not the only school in Chicago that the board recognizes as being in good standing, when evidently they are far from coming up to even a low standard In the *New York Medical Journal* of August 25, Dr Julius Grinker exposes one of these, the "Harvey" After commenting on a paper published in the *Journal* by Dr Morton, of St Joseph, on medical education, he showed up the sorry state of affairs which existed in Chicago and Illinois as follows

"Allow me to state that upon careful investigation he will find in the city of Chicago, besides the three regular medical schools that maintain a high standard, a number of inferior evening colleges of medicine, the purpose of their existence being to defeat the spirit of the medical practice act, though they profess to comply with the letter of the law

"These evening colleges of medicine grant diplomas after an attendance varying from six months to four years, which the State Board of Health recognize Upon the payment of $5 and the presentation of such a diploma, the State Poard of Health of Illinois grants applicants a license to practice medicine and surgery in the State of Illinois"

After eulogizing the Illinois State Board of Health as it used to be, he says

"It is this very same State board of health—but now with another secretary—that enables colleges like the Harvey and Harvard night schools of medicine to do a thriving business of inducing young and middle aged men and women to leave the workshop and the stock yards, where they slaughter cattle, for the more remunerative occupation of slaughtering mankind"

Speaking of the Harvev Medical College, Dr Grinker says

"This school, as well as others of the same character in the city of Chicago, allows its students to work all day at their respective operations, and exacts of them an attendance upon lectures three hours evenings, namely, from 7 to 10 P M, although excuses of three months' absences are accepted

"As for clinics, they receive mention in the *Catalogue*, and students graduate without ever having seen a single capital operation at the college, their being no hospital connected with it, and but few dispensary clinics

"The facilities of the school are of the most limited kind It is located on a floor and a half of an office building, where there are a dentist, a private dispensary of an advertising doctor, and a good luck store One can form an idea of what kind of material they can get up there for the benefit of evening students"

Dr J W Scott, the secretary of the State Board of Health of Illinois, answers Dr Grinker in the *Journal* of August 15, and accuses him of having been connected with the school himself, and in reply to this Dr Grinker says (see *Journal*, August 29)

"The history of my connection with Harvey is as follows After having read in the papers that the Illinois State Board of Health has decided to recognize the Harvey School of Medicine, I allowed my name to be used in connection with a professorship I was invited to the college, and the secretary offered me the chair of pathology, which I accepted Previous to my acceptance I had several conversations with the secretary in regard to the scope of the institution, its work and its ultimate future, from all of which I gathered the remarkable admission that this school was only intended to be a preparatory school, a so called "feeder" for the day schools of medicine, and that it was expected that some day one of the regular day schools would buy up the night school and amalgamate with it She assured me on a later occasion that her senior class was virtually useless, that none of the members of the class had a right to graduate, and it was not intended that they should I then reasoned Are there not reputable physicians teaching popular physiology and chemistry in the New York evening high schools, and why should I not connect myself with a preparatory school of medicine?

"And here comes the most interesting part As long as I was only teaching pathology to juniors I had no idea of the mental caliber of the seniors, who never were juniors in this institution, and some not in any, but when my colleague, the regular professor of practice of medicine, temporarily discontinued his course of lectures, I had ample opportunities in my quizzes and lectures before seniors to form a correct estimate of the composition of the class

"Imagine my surprise when at the end of the term I received a note to come down to the office and sign diplomas! About the same time I was informed that students would graduate as full fledged doctors, and eight diplomas were presented to me for my signature as the professor of pathology I asked for credentials which would show that those eight seniors had passed in my branch with some reputable teacher, but was told that the directory was well satisfied that the students had passed in pathology somewhere I then stated that I should not attach my signature to any of those diplomas until I had satisfied myself that the holders of them had passed in my branch The secretary then told me that students might produce credentials if they saw fit to do so, but that they would graduate anyhow, furthermore that such a request on my part was unheard of, and I was the only one of the faculty asking for credentials

'It was at this time that I discovered a diploma mill, and I hastened to resign my professorship immediately, and who would not?

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"On the evening of the same day I met Dr Scott, and asked for an investigation of Harvey Medical College

"Never was I more surprised than when Dr Scott, whom I saw for the first time, answered all my objections in almost the same words that the secretary of the college had made use of the previous day He knew by heart the name of every graduate of Harvey College, and was armed with an array of arguments that were simply astounding "

And Dr Grinker goes on and shows that Dr Scott knew too much about the Harvey Medical School not to be intimately connected with it Proceeding, he tells of the fight he and others made before the board to have the school declared not in good standing, how Dr Scott, the secretary of the board, fought them at every step, and how he finally gave up in disgust

It is interesting but not pleasant reading when one remembers what the State Board of Illinois used to be What has become of the spirit that used to animate it? What has become of the spirit and courage of Dr Rauch? There was a time when the Illinois board was a beacon light for those who were striving to elevate the standard of the medical profession of the country It gave courage and hope to those who were anxious to raise the standard of medical education in the United States so that the title of "American doctor" should cease to be a reproach, but rather an honor, before the people of the world There was a time when if the Illinois board recognized a school it was recognized over the country There are eighteen medical colleges in Chicago, exclusive of the post graduate schools, and of these seven ought to be recognized, and no more There is not one of the others that comes up to even a fair standard And yet what can the Nebraska and other boards of health do if these schools show up the required three years' course and clinical instruction? Nothing With our present law they must recognize them, unless evidence outside can be procured that will give a good reason for refusal —*Western Medical Review*

Intercurrence of Infectious Diseases —In the *Archives of Pediatrics*, Dr Alfred Hand, Jr , of Philadelphia, reports two cases, brothers, in which there was the coexistence of two and three (respectively) zymotic affections

1 W B , aged 6 years, suffered from diphtheria with a second attack of measles On February 10, he came under notice, complaining that his throat had been sore for several days Inspection then showed swollen tonsils with distended follicles and a slight grayish deposit on the right wall of the pharynx, the gland at the angle of the jaw was scarcely palpable, the temperature was 98 6 degrees and the pulse was 85 A culture was taken from the throat, and the child was isolated and put on tincture of the chlorid of iron internally, and the above mentioned spray locally On February 11, at 10 A M , the clinic diagnosis of diphtheria was clear, the pseudo membrane having spread from the pharynx over the posterior pillar on to the tonsil, causing glandular enlargement and an intermittent weak pulse The clinic diagnosis was confirmed bacteriologically, and as soon as possible 600 antitoxin units were given On the following day the membrane was much less in extent, and by the next day it had entirely disappeared, strychnin and digitalis seemed indicated the latter and the iron being given for six days, the strychnin being continued for two weeks and a half The case ran without fever at any time until February 24, when the temperature rose to 102 degrees Measles was suspected, but the mother asserted that he had had them *four years ago*, and from her description of the disease as it affected her five children there seems to be no reason to doubt that it was true measles and not roetheln However, three days later, W B was covered with a typical rash of measles, the temperature curve showing the preeruptive remission and the eruptive rise Convalescence was without incident, the diphtheria bacilli persisting until 5 per cent nitrate of silver solution had been used locally The immunity which one attack of measles usually furnishes toward a subsequent one is, it is well known, sometimes overcome That it would occur more frequently is probable if the infection should be so concentrated and the exposure to it so long as in W B 's case It was not possible to isolate the brothers on the appearance of the measles, and the two occupied the same bed

2 C B who had an intercurrence of diphtheria, measles and chicken pox, was 4 years of age He was first seen February 7, having numerous varicellar blebs on face and hands The source of contagion was readily traced On February 11, having been exposed to diphtheria, as shown in the first case, he was carefully examined at 10 A M for signs of pseudo membrane, none being visible in the nose or throat, although the throat was reddened At 1 30 P M , as he was about to receive an immunizing injection of antitoxin, his skin felt warmer than normal, and the thermometer showed a temperature of 101 6 The pulse was 140, the glands at the angle of the jaw were swollen and the left nostril was occluded by the swollen mucous membrane and a thin gray pseudo membrane Six hundred antitoxin units were injected and cultures were taken separately from the nose and fauces, the report from the bureau of health being affirmative as to the presence of the diphtheria bacilli in the pseudo membrane, but negative as to their presence in the throat On February 12, his temperature was 100, and the left nostril was apparently in a perfectly healthy condition, all the swelling and the pseudo membrane having disappeared The temperature stayed slightly above normal for several days, the explanation for this not appearing until February 14, when the child was covered with a profuse measles rash An irritating cough was a prominent symptom, and a slight exudate was detected on the left tonsil, but a culture from this failed to show the diphtheria bacilli Convalescence was uninterrupted, being rather protracted, as the diphtheria bacilli were obtained by cultures from the nose (and ultimately from the fauces) for three weeks longer, in spite of, or possibly because, local treatment by means of a spray consisting of equal parts of peroxid of hydrogen, listerin and water The rest of the medication consisted in a few doses of strychnin, tincture of the chlorid of iron, and of a cough mixture composed of ipecac and citrate of potash

It is also interesting to note the presence of the diphtheria bacillus in the respiratory passage during the marked catarrhal lesions of measles, and yet with no formation of membrane Whether this can be ascribed to the antitoxin injections or not, can not be established, but under former modes of treatment a relapse of diphtheria might, with reason, have been expected

The "Livery" Phase of Gout, The Case of Sir Walter Scott —Dr George Harley writes upon gout for the London *Lancet* of July 4, referring in an interesting way to the tortures that were undergone, through the malady, by that friend of our boyhood's reading hours, Sir Walter Scott He says, ' Murray Forbes said that gout, diabetes, renal calculi, gallstones and jaundice may all occur in the same patient In order that the reader may not suspect me of manufacturing a case to confirm the statement, I shall furnish him with one whose authority is beyond dispute, seeing that it is none other than that of the renowned Scottish novelist, Sir Walter Scott, extracted from his own diary and thereby rendered all the more valuable from the fact that the account he gives of his clinic history is alike unbiased by medical dogma and personal theory, for he was a lawyer and not a medical practitioner Sir Walter tells how he had to diminish the use of alcohol 'for fear of a weakness in the direction of diabetes, a disease which broke up my father's health ' He also says he 'was seized with a most violent pain in the right kidney, which Dr Clarkson diagnosed gravel augumented by bile' [illegible] life says he occasionally suff [illegible] of gallstones accomp [illegible] describes more than one of 'these excruciating attacks ' More over in various parts of his journal Scott refers to the violent attacks of gout he had at different times in his feet, knees, gums and back, comparing the pain to a 'scorpion's bite,' and its intensity as being sufficient to make him 'howl ' As is the case with most 'livery' subjects Sir Walter Scott was subject to fits of great mental depression Alluding to one of these in 1826 he says it was accompanied by 'a fluttering of the heart' and a feeling as if he 'knew not what was going to befall' him Like many other gouty and 'livery' people Sir Walter Scott ultimately died from apoplexy, so that his is a most instructive case of hereditary liver derangement, associated with gout, diabetes, renal calculi, and gallstones, and ending in apoplexy When all the foregoing hepatic pathologic data are considered it is evident that gout in different people must require entirely different forms of treatment And in order to treat a case philosophically each individual constitutional peculiarity must be prescribed for quite as carefully as the special condition denominated gout, for while one patient may be benefited by colchicum it may on another act as a poison Carbonated alkali does good to one, and iodid of potassium acts like magic on another, whereas, as Scudamore discovered, many require their livers to be set to rights before any gout remedy whatever is of the slightest use This is one of the reasons why several of the vegetable purgatives, in combination with quinin and digitalis, have been vaunted by some of our continental *confrères*, and mineral waters by others as podagra specifics But the curative effects of both the one and the other of them spring mainly, I believe, from their hepatic action Piperazin, salicylate of soda, diuretin, and guaiacum are all useful in certain cases Exactly in the same way different gouty constitutions tolerate different wines It may, however, be laid down as a general rule that the less acid and the less alcoholic a wine is the less likely is it to disagree with a gouty patient ince it is that the sour forms of champagne at present sold England should in all cases be shunned, no matter what one told by the uninitiated to the contrary Champagnes such the French themselves drink are the safest, for that sugar gives gout is alike contrary to scientific observation and every day practical experience Again while hot applications with anodyne liniments and hot alkalin fomentations are of marked benefit to some, I know from personal experience that ice applied to the painful part until the skin over it is frozen will occasionally give immediate relief Massage again, either moist or dry, when it can be tolerated often greatly expedites the cure Gout is such a protean form of disease that no special line of treatment can be formulated for it as a whole, each constitution and each individual paroxysm requires to be treated according to its own special conditions "

PRACTICAL NOTES

Treatment of Children's Burns —For superficial burns, lotions of warm or hot boiled water, followed by the application of a tarletan compress folded five or six times and dipped in a solution of boric acid, 10 grams, antipyrin, 6 grams, sterilized water, 250 grams Bandage with the following salve Boric acid, 3 grams, antipyrin, 1 to 2 grams, vaselin, 30 grams Preserve the epidermis as much as possible and merely prick the blisters at the lowest point If the burn is on the hand or arm, it must first be plunged into a basin of warm boiled water, reducing the temperature gradually, and washed with soapy water, then with a 2 per cent phenic water, and the blisters pricked without removing the skin If there is pain, moisten with a tarletan compress wet with a solution of saturated boric water, 500 grams, laud Sydenham, 4 to 10 grams After this Reclus' salve can be applied Iodoform, 1 gram, antipyrin, 5 grams boric acid 5 grams vaselin, 50 grams If the burn extends over a large surface of the body, the garments must be removed with the greatest care not to tear off any of the epidermis, which must always be carefully preserved Then place the child in a large warm bath, and perform the antiseptic toilet of the parts involved, with chloroform anesthesia if necessary, and dress the same as a hand or arm For deep burns, after the antiseptic toilet of the parts involved, apply a dry bandage of iodoform gauze with plenty of cotton If the burn is on a member it can be dressed with the following dry powder to attenuate the suppuration Iodoform, 2 grams, charcoal and quinin, each 50 grams Wait, if necessary to amputate, until after the shock period has passed —Périer in the *Journal de Méd de Paris*, September 6

Placenta Previa —A writer in the *Medical Sentinel*, October, remarks that Dr Senn in his address at Atlanta came in closer touch with the great mass of laborers in our profession, than any other writer has in anything presented to us during the present year He proceeds to describe a couple of cases of placenta previa, emphasizing 1 The beneficial effect derived from ergot, and its application to these cases, producing such strong contractions, the tonicity of which was permanent for hours 2 While it is fatiguing, still the hand makes an excellent tampon for applying pressure, and at the same time can be utilized as a dilating agent of the os, when time is such a valuable factor Again the dilation consequent upon its use prepares the vulva and perineum for the passage of the head when we resort to the use of forceps

Artificial Serum for Washing out the Serous Cavities —Mengus (*Independence médicale,* July 22), relates two cases The first a hydrocele of the tunica vaginalis testis that had relapsed after the employment of an injection of tincture of iodin It was cured by injecting a boiled and filtered 0 70 per cent solution of sodium chlorid at the temperature of 104 degrees F The second case was one of ascites in a patient with heart disease Paracentesis had had to be performed six times in the course of five months, and the man was becoming cachectic The seventh puncture was followed by the injection of about a quart of the same solution at the same temperature After massage, about three quarters of the amount was withdrawn The patient regained his general health, and at the time of the report, three months afterward, no further effusion had taken place —*N Y Medical Journal*

Cocainization —Reclus has a record of 3,500 successful cocainizations, and always administers it to the patient in a reclining position, retained until after he has eaten something He also uses a hundredth solution in all cases, and never allows it to be injected into a vein, nor in larger quantities than 12 to 15 centigrams He states that cocain allows important and delicate operations to be performed almost without assistance, and without the loss of time, the annoyance and the dangers of chloroform He considers its use indicated in the removal of subcutaneous tumors, in incising an abscess, in ingrown nails, amputations and disarticulations of the phalanges and metatarsus, in herniotomy, in the radical cure of hernia and hydrocele, in anal dilatation, circumcision and castration, in opening abscesses and hydatic cysts of the liver and in making an artificial anus The long duration of the anesthesia is a point in its favor, the skin can be sutured without pain even after an operation that has lasted twenty to twenty five minutes If the above simple rules are followed, there need be no fear of syncope which is the fault of the administrator and not of the cocain The reclining position is imperative —*Revue Int de Méd et de Chir*, September 10

Chronic Pericarditis Simulating Cirrhosis of the Liver —*Pick* reports three cases in which the clinic picture was that of cirrhosis of the liver, but in which the autopsy showed, in spite of the fact that there were no symptoms of heart disease, that a chronic adhesive pericarditis was the primary affection to which the condition of the liver was secondary He sums up his paper as follows There is a complex of symptoms which simulates mixed forms of cirrhosis of the liver, with hepatic enlargement and great ascites, but without icterus, which is due to an increased growth of the connective tissue of the liver from the disturbance of circulation produced by a latent pericarditis This may lead, through stasis in the portal circulation, to the most enormous ascites This is more common in early life, but nevertheless is also observed in later years In the differential diagnosis stress must be laid on the lack of any etiologic factor for cirrhosis of the liver, a history of the previous pericarditis and edema of the feet, and a thorough examination of the heart —*Boston Medical Journal*, October 8, from *Ztschr f Klin Med* , Nos 5 and 6

Congenital Luxation of the Hip Joint —Lorenz claims to avoid the disadvantages of the methods of Mikulicz, Paci and Schede, by what he calls his functional method He proceeds first by reduction, then reposition, formation of the acetabulum and restitution Reduction is accomplished by extension, with the use of the screw in narcosis, reposition by flexing, opening the acetabular cavity, and maximal abduction The amount of outward rotation varies in different cases, and the smallest amount of abduction that will accomplish the reposition and maintain it, is the limit Then follows three months' fixation of this position with an immovable bandage The soft parts that formerly prevented, now press the head of the femur into place in the acetabular region, thereby modeling it in a measure In the severest cases the limb can not be walked on for two or three months, as the amount of original abduction does not allow the use of a raised sole at first This can be resorted to later as abduction grows less, and it is made lower by degrees from four to two centimeters, etc The treatment lasts from six months to a year It is adapted for children up to 6 years Surgical intervention is necessary, of course, in cases of irreducible luxation Double sided luxations are treated together at the same time Lorenz has treated thirty cases successfully in this way Four double luxations produced unsatisfactory results The advantages of this treatment over the surgical are that the number of passive movements is less, the treatment requires less time, and the leg is not shortened so much Lorenz also emphasizes the importance of ambulatory after treatment — *Wien Klin Rundschau*, September 20

Causes of Death after Laparotomy —Fritsch of Bonn suggested at the recent congress of German Naturalists and Physicians, that whichever method a surgeon has made his own, and can perform with ease and rapidity, that is the best for him , but it does not follow that it would be the best for others He considers that the results of the various methods in vogue are due not so much to the special method nor to antisepsis, as to the skill, rapidity and subsequent care of the operators The normal blood destroys or eliminates the cocci, but if the heart is weak, the circulation sluggish, it is unable to effect this, and the cocci are not destroyed, but thrive and locate wherever they find a lowered vitality, as in the peritoneum after an operation Persons do not die after a laparotomy because they become septic , they become septic because they are dying or while they are dying He advises, therefore, that in cases of weak or debilitated heart, in thrombosis after pneumonia or influenza, it is best not to operate at all, but to wait Debilitating measures, too cool baths, hunger, strong purgatives are to be avoided before the operation The technique must be good , the after treatment very careful Lavage of the stomach, warm enemas tonics, quinin, etc , combat the weakness A long and tedious operation lowers the vitality, especially when the abdomen is opened, and hence perfected and rapid technique, whatever the method, increases the chances of success He concludes by warning operators not to trust too much to antisepsis, but to improve their skill and help to establish the indications for the various typical operations, instead of trying to invent new ones

Malacin in Rheumatism —Malacin is a phenacetin with salicylic aldehyde in the place of the acetic acid It has been tried in Russia as a substitute for salicylate of soda in a few cases of acute and chronic rheumatism, and its success warrants further investigation The cure followed in four to six days, the pains rapidly disappeared and there were no stomach disturbances nor depression It was administered in 1 gram powders three to five times a day , a total of 17 to 26 grams It has also proved beneficial in neuralgia —*Journal de M de Paris*, October 4

Goitre from Administration of Thyroid Extract —A recent paper by Dr Robert Hessler, of the Northern Indiana Hospital for Insane, gives an account of what corresponds to an attack of exophthalmic goitre, brought on by large doses of desiccated thyroid gland The case was that of a cataleptic who had lain immovable in bed for over three years, there was an absence of motor and sensory activities , the feeding was by means of the nose tube Under increasing doses of gland constantly increasing activities resulted, until finally the patient "returned to life" and was able to speak and walk At a time when 75 grains were given daily, symptoms of exophthalmic goitre appeared and the remedy had to be discontinued temporarily , the pulse going up to 160 In the course of a few days the patient relapsed to his usual condition but "revived" on again receiving the remedy, with a return of the symptoms mentioned The case was reported in the *Indiana Medical Journal* A similar case recovered promptly in a few weeks on small doses The thus artificially produced exophthalmic goitre had all the characteristics of the natural disease, minus the glandular enlargement, and all symptoms disappeared on withholding the remedy or under a small dosage From a study of this case, and several others receiving similar treatment, the author concludes that Graves' disease is due to an over stimulation of the nervous system by products of the thyroid gland, and that the administration of this gland as a remedy is injurious , the proper treatment is one tending to reduce the functional activity of the thyroid gland

Treatment of Pneumonia with Inhalations of Amyl Nitrite —Hayem has used this treatment in seventy five cases of pneumonia, and recommends it in high terms as successful in diminishing the dyspnea, rendering expectoration easier and improving the physical phenomena in general One inhalation a day was usually sufficient, but occasionally one was given morning and night Fifteen drops were inhaled on a compress at a time, repeated if necessary until 100 drops had been used, although the desired results were usually secured with less The treatment was continued through the whole course of the disease, and for a couple of days afterward He ascribes its efficacy to its influence on the circulation of the blood in the lungs — *Memorabilien* October

Treatment of Post Scarlatina Nephritis —Schmey recommends his method of treating this dangerous complication as he has practiced it for ten years with unfailing success It is especially effective in cases with a tendency to dropsical swellings The child is wrapped in a wet sheet from head to feet, with a woolen blanket outside He is then given every hour a teaspoon of syrup jaborandi until he is in a profound perspiration, and not until then is he released from his wrappings This process is repeated every day until all the swelling has subsided, which is usually in the course of two or three days He prepares the syrup by the following formula 0 3 folia jaborandi concis , heated in a vapor bath for ten minutes, in 20 grams water It is then strained and 10 grams sugar added He administers subcutaneous injections of pilocarpin instead of the syrup to children over 15, and has the pack preceded by a hot bath —*Memorabilien*, October

Tertiary Syphilis in a Child of Five —Feulard describes a case brought to him for a sore in the nostrils, which examination disclosed to be a pronounced case of tertiary syphilis, with destruction of the nasal septum, the palate and the posterior part of the pharynx, the teeth shaped like the teeth of a saw with other unmistakable lesions The father accompanying the child was a strong healthy man, who had two healthy grown daughters, all free from any syphilitic taint The mother had died a year after the birth of this child, and the father had before this, grave reasons for doubting his paternity, although the child might have been infected while it was at nurse in the country The case is remarkable for the rapidity with which the disease had developed unrecognized to the tertiary stage, and the fact that it had progressed without attracting attention or causing much annoyance to the child —*Annales de Derm et de Syph* , September

Hospital Contagion of Syphilis —Fournier records the second case in his hospital experience of a patient being treated for eczema and being discharged cured, returning soon after with syphilis contracted in the hospital He is inclined to ascribe the contagion to the patient having perhaps exchanged caps with some syphilitic, as such extreme precautions are taken at the Saint Louis to prevent infection Leredde suggests that syphilitics with lesions in the mouth ought not to be allowed to expectorate promiscuously any more than tuberculous patients —*Ann de la Soc de Derm et de Syph* , September

Tuberculosis of the Spinal Cord —Schlesinger describes a case of pronounced motor and sensory disturbances in a man of 42, commencing with sudden vertigo and vomiting of fluid through the nose, violent pain the right half of the face, and terminating fatally with complete ataxia, etc The necropsy revealed an isolated tubercle in the spinal cord, its maximum of development corresponding to the third cervical Transverse sec on showed that it filled almost the entire space of the spinal rd, only a thin layer of white matter partially surrounding ; The gray matter had entirely disappeared The tubercle iminished in size as it approached the first cervical, where he lesion was confined to the gray matter A few scattered ollicles were found at the decussating point of the pyramids The medulla was unusually large —*Presse Méd* , October 3

Non Surgical Treatment of Peri uterine Phlegmon or Pelvic Cellulitis —Lutaud treats non suppurating uterine phlegmon of the broad ligament behind or in front of the uterus by absolute repose at first, with narcotics, rectal opiates, etc , to arrest the pain which is always severe in acute cases, and is the best guide to the location of the tumor He then controls the vomiting, fever and hyperthermia He prescribes for this purpose Antipyrin 2 grams, syrup of papaver somnif 30 grams, spirit of menthol 10 grams, tilia water 60 grams A tablespoonful every hour He sometimes applies leeches to the hypogastric region over the tumor when the phlegmasia extends to the abdominal wall, with mercurial salve and cataplasms He also inserts medicated glycerin suppositories into the vagina, or tampons dipped in Glycerin 30 grams, cocain hydrochlorate 1 gram He keeps the vagina aseptic by warm irrigations three or four times a day, of the solution Naphthol and chloral, each 10 grams, thymic acid 1 gram, alcohol 240 grams Two tablespoons of this to the liter Any other antiseptic can be used, except sublimate, which is too irritating for prolonged use After the pain is under control, the tumor can be investigated, and even if there is suppuration, surgical intervention is not always necessary, as numerous examples are known of the tumor discharging spontaneously into the rectum, the bladder or vagina, followed by complete cure The spontaneous discharge may of course produce fistulas or multiple pelvic abscesses, which render laparotomy or hysterectomy inevitable But if, as often happens, there is no suppuration, the tumor hardens and is not painful, but dangerous on account of the adherences produced The treatment in these cases is principally by massage to destroy the adherences and restore movability to the uterus, while assisting the complete resolution of the neoplasm He sometimes also uses blisters or conical cauteries, tincture of iodin or croton oil, with always oversight of the general health and especially of the functions of the bladder He usually administers the following in cases of indurations and adenopathies Sodium iodid 20 grams, syrup of bitter orange 500 grams One or two tablespoons a day He emphasizes the value of massage as one of the most effective therapeutic means of treating chronic affections of the uterus and the adnexa By introducing two fingers into the vagina to the cervix or the seat of the tumor, and pressing with the other hand on the abdomen, the indurated mass or the adherent uterus can be seized between the two hands and by gentle and gradual manipulation reduced and rendered movable —*Journal de M de Paris*, October 4

Dermatitis Roentgeni —Dr Conard, in *Codex Medicus*, August, reports a case of skin affection that was, in his opinion, indirectly referable to the X ray "R B , photographer, consulted me August 24 on account of what he considered rheumatism in the first and second fingers of his left hand He complained of pain and swelling and stiffness of the joints He had first noticed some discomfort in them about five or six days previously and had used some home remedies, but the pain and swelling increased Upon examination, I found the first and second fingers swollen and extremely sensitive to the least touch and of a peculiar, livid brown color on their dorsal surfaces from the tips down to and including the carpo metacarpal joints, involving the tissues toward the thumb and then fading away The palmar surface was normal The line of demarkation was very conspicuous and decided by objective and subjective tests There was entire absence of constitutional symptoms The pain was described as of a burning or scalding character, as if burned with a hot iron, upon further questioning him I learned that in connection with his regular photographic work he had photographed with Roentgen rays, and had given public exhibitions of the same, in doing which the very part of his hand affected as described was for a considerable time and on numerous occasions exposed to the rays, at a distance of two or three inches from the Crookes' tube During the time he was exhibiting X rays he would occasionally have his fingers in chemic solutions, especially potassium cyanid, but he was always careful to wash them thoroughly, yet the index finger, which was the most in the solutions, was the most affected and was first attacked around the nail, the process extending up that finger and down the other Evidently some of the chemicals had been absorbed by the skin and the X rays had driven them into the tissues, thus helping to set up this peculiar form of dermatitis Another peculiar result of his work was the changing of the color of his mustache from black to a dull brown and its falling out in places, leaving the lip perfectly smooth Treating the condition on general principles, for the induration, pain and stiffness, I ordered ichthyol and lanolin (1 to 7), to be applied on soft linen or lint In two days both fingers down to the second joint were blistered This was apparently caused by the ichthyol, although the continued application of it to the other part of the fingers failed to produce blisters there Relief from pain and burning was complete after the blisters formed Following and up to the present time, two weeks after the trouble was manifest, the skin was a dark brown or livid color, much thickened, hard and stiff, with the sense of touch or feeling greatly diminished All inflammatory symptoms, pain and swelling having subsided, the applications were discontinued The indications now are that the cuticle will disquamate, and the skin gradually assume its normal condition and appearance "

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SATURDAY NOVEMBER 7, 1896

THE AMERICAN PUBLIC HEALTH ASSOCIATION AND AMERICAN BACTERIOLOGISTS

The sanitarians and public health men on [illegible] side of the Atlantic have recently given a decided [illegible] to bacteriologic work At the meeting of the American Public Health Association in Montreal Canada two years ago, a proposition from its committee [illegible] the pollution of water supplies for a coöperative [illegible] gation into the bacteriology of water was app[illegible] by the Association, and Major CHARLES SMART [illegible] Army, was appointed chairman of a committee [illegible] carry the suggestion into practice It was the [illegible] tion that the committee when fully formed sh[illegible] consist of all those bacteriologists who were [illegible] to coöperate in the investigation Letters [illegible] promptly from the notable laboratories of the country manifesting interest in the proposition and expressing a desire to participate in the undertaking Some men of large experience and more than national reputation whose administrative duties prevented them from participating in laboratory work, heartily agreed to act as an advisory council to the committee in developing its work This council consisted of Surgeon General STERNBERG of the Army Professor WELCH of Johns Hopkins University, VAUGHAN of Michigan, PRUDDEN of New York, and SMITH of the Agricultural Department An effort was made to settle by correspondence the important subject of the laboratory methods to be adopted in the investigation, but this developed [illegible] f different labora-tories that it became needful to call a convention for a thorough discussion of the points at issue The convention met, but although the members were informed beforehand of the subjects that were to be brought up for settlement, many of these presented so much difficulty that the whole subject was referred to a committee consisting of ADAMI of McGill University, WELCH of Johns Hopkins, ABBOTT of the University of Pennsylvania, SEDGWICK of the Massachusetts Institute of Technology, SMITH of the Agricultural Department, CHURCHMAN of New York, FULLER of the Louisville Water Company, and SMART of the Army This committee met in New York in February last to digest its materials and outline its work Its report was presented at the meeting of the Public Health Association in Buffalo in September last It insists upon the importance of uniformity of methods if species are to be grouped correctly It recommends for future work certain definite tests to be adopted in every case, failing which a description shall be held to be incomplete It divides the tests applicable for descriptive work into two categories, the necessary and the optional but these terms are used with some little hesitation, for many of the tests included among the optional are of value for purposes of species differentiation in special cases and might with propriety be included in the first category The necessary tests are described under the headings 1 source and habitat 2 morphology 3 biology, the last including cultural, biochemic and pathogenic character The optional are aggregated under two heads, morphologic and physiologic The report is not a manual of laboratory methods It dwells only on those points on which it is felt that there is need for greater uniformity in procedure or a more precise and correct [illegible] When presented at Buffalo it was [illegible] so far as it had to be submitted to certain of the [illegible] bers of the committee for final revision It [illegible] doubt appear in an early issue of the Journal of the American Public Health Association The [illegible] Water Committee of the Association [illegible] carry out its original proposition of a coöperative investigation into the bacteriology of water [illegible]

[illegible]

THE [illegible] OF [illegible]

[illegible] New Zea[illegible]

[illegible]

ings of the unfortunates It is natural enough for the laity to dread the introduction amongst them of contagious diseases, and precautions are certainly justifiable, but it is another thing for physicians to encourage or even tolerate an increasing fear of disorders the contagion of which is manageable or avoidable by simple and readily available hygienic precautions When the disorder is one like tuberculosis, that may exist anywhere in a latent form, and to which in times past, and even yet, some exposure has been and is almost inevitable, any excessive and selfish fear is altogether unreasonable

In a paper read before the American Climatological Association at its late meeting Dr Vincent Y Bowditch of Boston made an earnest plea for moderation in our statements regarding the contagiousness of pulmonary consumption, which was especially inspired by reckless and extravagant utterances by medical men as well as laymen in a recent discussion in the daily press It was stated by a physician, possibly by more than one, that consumption "is as contagious as smallpox," and that "hospitals for consumptives are a source of danger to the whole surrounding community " Dr Bowditch shows that in well regulated hospitals or sanitaria for consumptives contagion is almost unknown, or, at least, that with ordinary cleanliness and care as to the destruction of the sputa, the danger is reduced to a minimum While the vitality of the bacillus tuberculosis is very great under favoring circumstances, the experiments of Ransome and Delepine have shown that, when dried, an exposure of only a few hours to direct sunlight is fatal to it, a fact that goes far to account for the advantages of climates like that of Colorado and New Mexico in the treatment of this disease They also find that even a 1 to 10 per cent solution of chlorinated lime is an efficient disinfectant of clothing and apartments that have been soiled by the sputa, which alone are the sources of the infection These results have not so far been contradicted, and accepting them as true, some ardent sanitarians will have, in common prudence, to moderate their statements, if not their convictions, on this subject

The fact is that physicians, like other men, are fallible and subject to go to extremes over any new and striking discoveries in pathology and therapeutics While there are many who are unduly conservative or backward in taking up and utilizing new facts, there are others who in their enthusiasm go altogether too far, and it is a question sometimes which of these two classes does the most harm When this human weakness of intemperance in conduct of statement affects matters of sanitary methods and precautions it is likely to add very effectually to the sum of human misery, a result in the production of which certainly no medical man should be desirous of having any part This question of the sanitary defense against tuberculosis appears, at the present time, the one most open to objectionable possibilities of this nature, and Dr Bowditch's paper seems, therefore, a very timely communication

DEGENERACY THEORIES OF THE SEVENTEENTH CENTURY

Physicians who are accustomed to trace the development of the degeneracy hypothesis to Nordau or Lombroso will doubtless be astonished to learn that its essential principles were recognized by the Bohemians who formed the literary class of the time of Shakespeare Thistleton Dyer ("Folklore of Shakespeare") with a quaint unconsciousness of the coeval teachings of Morel remarks that "it was an old prejudice, which is not quite extinct, that those who are defective or deformed are marked by nature as prone to mischief " Thus in "King Richard III ' Margaret says of Richard, Duke of Gloucester

> Thou elfish mark'd, abortive, rooting hog,
> Thou that was sealed in thy nativity,
> The slave of nature and the son of hell

She called him hog in allusion to his cognizance, which was a boar A popular expression in Shakespeare's day for a deformed person was a stigmatic It denoted anyone who had been stigmatized or burnt with iron as an ignominious punishment, and hence was employed to represent a person on whom nature had set a mark of deformity Thus in "3 Henry VI " Queen Margaret says

> But thou are neither like thy sire nor dam,
> But like a foul misshapen stigmatic
> Mark'd by the destinies to be avoided,
> As venom toads, or lizards' dreadful stings

Again in "2 Henry VI " young Clifford says to Richard "Foul stigmatic, that's more than thou canst tell " In "A Midsummer Night's Dream" mothers' marks and congenital forms are deprecated by Oberon from the issue of happy lovers

> And the blots of Nature's hand
> Shall not in their issue stand,
> Never mole, hare lip, nor scar,
> Nor mark prodigious, such as are
> Despised in nativity,
> Shall upon their children be

Constant allusions are met with in old English writers relating to this subject showing how strong were the feelings of our forefathers on the point One further instance given by Shakespeare is afforded by the words of King John (iv, 2) with reference to Hubert and his supposed murder of Prince Arthur

> A fellow by the hand of Nature mark'd,
> Quoted and sign'd to do a deed of shame,
> This murder had not come into my mind

The significance of stigmata as evidence of defect was recognized even by lawyers of the 17th century Bacon (who as Harvey says "Wrote on science like a Lord Chancellor") dogmatically accepts the coexistence of moral and physical defect, but in place of tracing both to the same cause, hereditary taint, remarks that "Deformed persons are commonly even with nature, for as nature hath done ill by them, so do they by nature, being void of natural affection, and so they have their revenge on nature" The notion of degeneracy as affecting physical structures was as old as EMPEDOCLES One quaint use of it was made by SILVIUS (of Fissure of Sylvius fame) in a criticism of VESALIUS ("From the Greeks to Darwin") VESALIUS (1514–1564) had brought the charge against GALEN (A D 131–200) that his work could not have been founded upon the human body, because he had described an intermaxillary bone This bone, VESALIUS observed, is found in the lower animals but not in man SILVIUS (1614–1672) defended GALEN warmly and argued that the fact that man had no intermaxillary bone at present was no proof that he did not have it in GALEN's time "It is luxury," he said, "it is sensuality which has gradually deprived us of this bone" This passage proves that the idea of degeneration of structure through disuse as well as the idea of the inheritance of the effects of habit, or the transmission of acquired characters, is a very ancient one The erroneous conception, that loss of structure was evidence not of advance, but of degeneracy, still mars many of the current researches on degeneracy and has led both LOMBROSO and NORDAU into many blunders

THE MEDICAL DEPARTMENTS OF THE ARMY AND NAVY

The Federal Government employs medical men in connection with three of its departments—the War, the Navy and the Treasury The officers of each are appointed by the President, confirmed by the Senate and hold life positions during good behavior Pay and status increase with length of service, as promotion is determined by seniority except in the case of the chief of each service, who is selected for office by the President The scale of pay and the grades of seniority are arranged on the same general plan so that at first sight one might expect competition for appointment to be equally active in all three of the services An Army Medical Examining Board has just closed a four weeks' session in Washington, D C after filling the vacancies in the corps by selecting eight men out of forty-five candidates, who presented themselves for examination out of forty-nine invited to appear During the past fiscal year three vacancies in the Treasury Department were filled by a competitive examination for which there were sixty-one applicants, thirty-six of whom underwent the ordeal of examination In the Navy 341 medical graduates made application for appointment but only thirty-six of these requested permission to appear before the examining board and only twenty-two availed themselves of the permission Six vacancies were filled from this number leaving ten unfilled at the end of the year This has been the experience of the Navy for several years past and the Bureau has been so embarrassed by not having a sufficient number of medical officers to fill important positions afloat and ashore that Surgeon General TRYON has recommended the appointment of acting assistant surgeons for temporary duty until the vacancies in the corps have been filled in the regular way These results show that the services of the Federal Government do not offer equal inducements to young medical men although they are organized apparently on the same general plan

The passed candidate of the Army Medical Board is commissioned an assistant surgeon with the rank and pay of a first lieutenant of cavalry, $1,600 a year At the end of five years service he becomes the equal of a captain of cavalry, and then by seniority the higher grades are reached, there being ten lieutenant-colonels, six colonels and one brigadier general to fifty surgeons with the rank of major and 110 assistant surgeons with the rank of lieutenant or captain according as they have served less or more than five years The proportion of officers of the higher grades is not so large as in some of the other staff corps of the Army, nor indeed as in the Navy Medical Department, but our Army brethern appear satisfied with present conditions as all those who now occupy these higher grades entered the corps at a time when a majorship was the highest rank that could be reached outside of the surgeon generalcy Ten per cent is added to the pay proper of the Army officer for every five years of service up to twenty years, so that should there be a delay in his promotion to a higher grade, its financial effects are considerably neutralized, but compulsory retirement of the older officers at 64 years of age makes progressive promotion for the younger men Quarters are provided for the medical officer and forage for his horses as in the case of other officers of like rank, and the conditions in time of peace are such that his home life may be as unbroken as that of a practitioner in civil life

In the Navy the personnel consists of a surgeon general or a chief of the bureau with the rank of commodore the naval equivalent of a brigadier general, fifteen medical directors with the rank of captain or army colonel, fifteen medical inspectors with the rank of commander or lieutenant colonel, fifty surgeons and ninety assistant surgeons The older officers have no general ground of complaint They have a high rank, corresponding pay and as most of them have already completed their sea service, their home life is comparatively unbroken, and good quarters are provided for them, when on duty at naval hospitals or navy yards They are absorbed into the retired list at 62 years of age But the conditions are not so pleasant for the passed candidate of the Naval Medical Board. He is commissioned an assistant surgeon with $1,700 a year, if at sea, and $1,400, if on shore duty, but with the relative rank of an ensign, the naval equivalent of a second lieutenant in the army, and during the three years which he is required to hold this rank, he is thrown into more intimate relations with the warrant officers of his ship than with his superiors in the medical department. When he becomes a passed assistant surgeon, he ceases to draw the 10 per cent. longevity increase of pay, although the corresponding grade of the engineers of the Navy are allowed this increase, and he does not receive the relative rank of lieutenant (equivalent to captain in the army) until all the line officers who antedated his entry into service have reached this rank, nor, when he has been promoted in his own corps to the grade of surgeon does his relative rank become that of lieutenant-commander, the equivalent of the army major, until the line officers aforesaid have been promoted. Of the fifty surgeons now on the Navy list only five have this, their proper rank, while forty-five are held down and have been held down for years waiting for the promotion of officers of the line.

Evidently legislation is needful to remove the obnoxious features of the Naval Medical Service or the high standard of professional qualifications will have to be lowered to permit the vacant positions to be filled. A bill to reorganize the corps should be supported in the next Congress by the whole strength of the medical profession.

DANGERS OF COCAIN

The recent death of a patient in a physician's operating room from the effects of cocain again calls attention to the dangers attending the use of this drug. Regarding the case in question we have no criticisms to offer, as the circumstances were such that a general anesthetic would apparently have been more dangerous than cocain. While in this instance no blame can be attached to the medical attendant for the untoward result, it at the same time recalls the deadly power of this drug. The number of fatal cases so far reported is happily not many, but those of severe poisoning are quite numerous. The employment of cocain is largely on the increase, it being frequently prescribed by druggists for the relief of toothache and other forms of local pain. It is also used by dentists, and oftentimes in a most reckless manner.

The poisonous properties of cocain seem to be especially pronounced when used in the urethra, nose and mouth. It is less so when employed in operations on the trunk and extremities. This raises the question as to whether the additional danger is due to the facility of absorption from these parts or to the semi-erect position in which most operations on the nose and mouth are most frequently conducted. Solutions of too great strength are often employed, some of them being made extemporaneously by adding a few grains of the drug to an unknown quantity of water. The studies of Schleich have shown that when efficiently used, very weak solutions may suffice for lengthy anesthesia of extensive areas.

We feel at this time that a note of warning is needed regarding the use of cocain. It should never be prescribed or used by any but qualified medical practitioners. When used by them it should be in solutions of known strength, and if for operations, preferably by the intra-cutaneous method of Schleich. The patient at the beginning of an operation in which cocain is used should be placed in a horizontal position, which should be maintained until the effect of the drug wears off.

LEGISLATIVE PREVENTION OF SUICIDE

The uninterrupted increase of suicides in Great Britain as officially verified for more than forty years, so says the recent three years' report, is again attracting attention. This, the jury verdict of insanity is far from explaining, as in ninety-nine cases out of a hundred the act of self-destruction is the only evidence of unsound mind on the part of the deceased. But this plea in most instances is a fiction of coroners' juries, originally designed to subvert the almost savage treatment of the corpse by the law itself. The disgrace of a cross-road burial with the impaling stake has never attained its object of a warning to the living, and the penalty of imprisonment in case of failure has likewise succeed not a whit better. In the State of New York there are already signs of a reaction in the shape of modifications of the latter law, or for the matter of that, an absolute repeal. The courts themselves affirm that the inevitable second attempt is certain to be effectual. Thus the concession to the feelings of relatives and friends counts for naught.

The strain of an advance civilization with its pessimism and the decrease of the religious sentiment only in part furnish reason for the present tendency toward the old Roman idea that this self murder was an act of courage rather than a mawkish bid for an often undeserved sympathy. May we not say that psychology rather than pathology can better solve the problem, since there is always present that indefinite something known as a moral twist? It is not enough for us to always beg the question by the dictum that it is a disease, why not rather call it an impulse taking instant form through fear of a certain repentance? Often, too, the means for self-destruction at hand suggest the act, just as much as other surroundings will divert into a contrary direction. We are all aware of the ingenuity of suicides and their patience in the study of expedients for glossing over their crime against posterity under the name of accidental death. Their act is born of egoism, which, by some is classed as a mental disease and the final doom is at the very least the disgrace of their survivors, which they often seek to mitigate by a homicide or two At all events no remedy is effectual after death

THE QUADRENNIAL ELECTION

The election of Major Wm McKinley to be the President of the United States will set the money machinery of the country in motion, and now that capital need no longer fear to come out of its hiding places we trust that prosperity may come to and abide with every reader of the Journal We trust that the good work of organization may go on apace and that the members may make renewed efforts to increase the membership Our Journal has prospered even in the face of the great financial depression which has affected all classes of business With the business revival sure to come, let us all have confidence, and show it by taking hold of the Association affairs with renewed vigor

CORRESPONDENCE

Give Full Names of Authors

Philadelphia, Oct 30, 1896

To the Editor —Having been engaged lately in a literary work involving considerable consultation of papers and verifying of references I have realized, as any one must under the circumstances, the extra labor necessitated by a practice which has always been more or less general with authors, of mentioning only the surname of writers and investigators referred to Any one who has had experience can not fail to have been struck with the large number of persons of the same surname who are contributors to medical literature, so that a reference to Dr Sydenham's or Dr Jones's views and Dr Ranklin's papers gives a very imperfect idea of the individuality of the author Take for example the name Hoffmann The student will find in the Surgeon General's Catalogue this surname more than one hundred times, and of these Hoffmanns quite a number are authors of voluminous and important papers So that to be told that Hoffmann believes thus and so, is of little assistance to the reader who desires to look up his views and papers Again, to take a name to which modern medical literature often refers—Laveran At least two Laverans, both French army surgeons, have written papers of importance The Laveran whose name is so identified with the malariæ plasmodium is A Laveran,[1] while Louis Laveran is a very different person Yet writers only quote Laveran It is needless to multiply instances They will occur to anyone My object in asking publicity to this letter is to beg writers to adopt the practice of giving the full name of the authority quoted This of course involves a little trouble at first to hunt up the Christian name, but as years roll on and we are all thus explicit in indicating the authorities quoted, it will become easier and easier, while the amount of labor saved to those looking up references will be immeasurable Especially important is it that the editors of the various handbooks and annuals which are now filling such a useful niche in medical literature should adopt the practice of using the full name, for it is from suggestions in such books that writers often want to look up references

Respectfully yours,

James Tyson, M D

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[1] Unfortunately even the Surgeon General's Catalogue has not the full Christian name

Serum-therapy

Chicago, Oct 31, 1896

To the Editor —In the last issue of the Journal I find a short letter referring to and criticising Dr H Lahmann's article on serum therapy As Dr Lahmann will hardly become acquainted with the contents of this letter, I think it my duty to reply to it in his stead, because it was I who translated his article for the Journal

In consideration of the fact that every serum treatment so far employed has proven to be a failure, and considering also that the efficiency of the antitoxin treatment of diphtheria is still either doubted or denied by a great many competent physicians, it seems to be quite a bold undertaking by any advocate of the serum therapy to call a physician whose therapeutic views differ from his, a quack

In concluding his letter Dr K says "We should be on our guard, having enough of the sort in the country " I would like to call his attention to the fact that there is another thing in this country and in the world, which we ought to guard against still more, and that is the abuse done with the drug treatment If we step behind the prescription counter of a drug store and look over the prescriptions, we will have a most elegant opportunity of studying a legitimate quackery which has done and is doing more harm to the sick than any "old-fashioned" treatment ever did or ever will do

Very truly yours, Carl Strueh, M D

PUBLIC HEALTH

Diphtheria in Illinois—Six cases had occurred at Newman, up to the 24th ult , with four deaths In addition to the reports from West Hammond and Newman, diphtheria has been reported as existing within the week ending October 24 at the following places in the State Flora, Sidell, Clinton, Sparta, Jacksonville, Springfield, Auburn, Virden, Chrisman, Galesburg, Orange Township (Knox Co), and Melrose, near Astoria The reports do not indicate that the disease prevailed extensively at any points, but an unusually large fatality is reported in proportion to the number of cases

Water Supply at East London—The vestry of Hackney, London, has been endeavoring to supplement the scant water supply of its poorer dependent population by a house to house distribution of water amounting to 100,000 gallons weekly since the first of August It has also supplied a number of storage jars, not less than 1,500 of them to families having no other means of storing water A subcommittee of the vestry has been in session every day, Sundays inclusive, all through the vacation period

Diphtheria in Indiana—Diphtheria is reported as epidemic in several counties in Indiana The southern part of the State has sent in the greater number of complaints The story is generally the same from all points The first case is pronounced tonsillitis by the attending physician, consequently no quarantine is established, and so the disease becomes epidemic In more than one place the people discovered that physicians had carried the disease, and demanded protection from the State Board of Health Although the State Board has miserable financial support still it manages to furnish culture outfits for diphtheria diagnosis and make microscopic examination without charge Recently at Columbus, a practitioner furnished a householder a written certificate to the effect that, "no contagious or infectious disease existed at house of————," despite the fact that cultures proved the reported tonsillitis to be true diphtheria To prevent the carrying of contagion by doctors the State Board of Health has passed rules directing specifically how they shall protect themselves when knowingly visiting contagious and infectious diseases

Payment of Kentucky State Board of Health Bills —Although it is provided by section 2053 of the Kentucky Statutes that the necessary printing of the State board of health shall be done in the same way and upon the same conditions, as other public printing is done, the court of appeals of the State says that it does not necessarily or properly follow that the cost thereof was intended by the legislature to be paid to contractors for State printing out of the general fund On the contrary, it thinks it plain that it should be paid out of the fund provided by section 2054, which appropriates $2,500 per annum, or so much thereof as may be deemed necessary by the State board of health, to pay the salary of the secretary, meet contingent expenses of the office of secretary, and the expenses of the board, "which shall not exceed the sum hereby appropriated " The court goes on to say, State Board of Health v Stone, Auditor, decided Sept 24, 1896, that although the State board of health is an institution invested with considerable responsibility, and undertakes to perform duties deemed essential to the general health and physical well being of citizens of the State, the position of its members is one rather of professional distinction than pecuniary gain, and hence the only officer connected with it entitled, under the statute, to compensation for services rendered, is the secretary, whose salary, though fixed by the board, can not exceed $1,200 The residue of the appropriation, as above $1,300, must cover all the expenses stated, including all legitimate cost of printing

The Etiology of Hereditary Stigmata —In the *State Hospitals Bulletin*, July September, Dr Frederick Peterson of New York city, contributes a very instructive article on the physical stigmata of degeneracy He closes his paper as follows

> A few words should be said concerning the etiology of the stigmata of degeneration When we come to investigate the causes which lead to their formation we meet with much difficulty Usually we must look to modifications occurring during fetal development, during the evolution of the child, modifications brought about by arrest or errors of development, not so much perhaps in the organs themselves (which show the effects) as in the central nervous system, in the nervous mechanism which governs heredity As the evolution of our bodies as well as our minds depends upon the brain and spinal cord and the countless nerve filaments which radiate from them to every tissue, so the nervous system plays the most important part in the influences which have to do with heredity The nervous coordination must be rearranged by strong stimuli in order to reproduce the hereditary impulse This is why traits acquired by us in our individual lifetime are not apt to be inherited by our descendants If a person loses an arm his children are not deprived of that useful member, for the nervous mechanism of development which has for ages produced arms in their proper places and which is fixed in the powerful hereditary impulse of the race has not been changed So in the breed of dogs whose tails have been cut off for countless generations, not one is born without a tail, because the nervous coördinations governing the evolution of the tail bear down with all the hereditary force of the race since its first beginning (when the tail existed though the animal was legless) to keep it in existence If in some way we could reach the nervous mechanism which is responsible for the evolution of the tail, we might modify or even prevent its development It is therefore some derangement of the nervous mechanism governing heredity which brings about deviations from the normal type, which gives rise to anatomic, physiologic and psychic anomalies which we designate as the stigmata of degeneration How is the nervous mechanism of heredity deranged? It may be readily and profoundly deranged in a variety of ways, for instance by poisons Thus alcohol disarranges the nervous mechanism of heredity in such a way that the descendants may suffer from the drink craving, from idiocy, insanity, epilepsy, hysteria, neurasthenia, from shattered nervous systems, for at least three generations, and in these unfortunates we find along with marked functional stigmata of degeneration, these actual physical deviations from the normal type which we call anatomic stigmata But idiocy, insanity, epilepsy and the like are in themselves conditions which disarrange the nervous coördinations so profoundly as to effect the hereditary impulse and give rise to anatomic and functional stigmata in the descendants What is bequeathed to the degenerate child is a fragile and unstable nervous constitution The evidence of this inherited fragility of the nerve mechanism may present itself as insanity, or it may be epilepsy, or it may be feeble mindedness, or it may be criminal tendencies, or it may be simple nervousness or hysteria or certain kinds of headache or possibly only eccentricity All of these disorders are more or less interchangeable and are merely proofs of an unstable nervous organization Where such conditions do not develop they may exist in a latent state and pass as a legacy to another generation Whether the neuropathic state be manifest or latent, we are apt to find anatomic stigmata of degeneration present on careful examination

Health Report —The following reports of mortality from smallpox, cholera and yellow fever have been received in the office of the Marine Hospital Bureau of the Treasury Department

SMALLPOX—FOREIGN

Bombay, India, September 22 to 29, 2 deaths
Gibraltar, October 4 to 11, 1 case
Hiogo, Japan, September 19 to October 3, 170 cases, 63 deaths
Licata, Italy, October 3 to 10, 3 deaths
Madras, India, October 7 to 14, 70 deaths
Manzanillo, Cuba, October 1 to 15, 2 deaths
Moscow, Russia, September 26 to October 3, 1 case, 1 death, October 3 to 10, 1 case, 1 death
Nogales, Mexico, October 17 to 24, 4 cases
Odessa, Russia, October 3 to 10, 12 cases, 5 deaths
Paris, France, September 26 to October 3, 1 case
Rio Grande do Sul, August 22 to September 19, 74 cases, 7 deaths
St Petersburg, Russia, October 3 to 10, 5 cases, 4 deaths
Tuxpan, Mexico, October 3 to 10, 2 deaths
Warsaw, Russia, September 26 to October 3, 5 deaths
Vera Cruz Mexico October 15 to 22, 1 death

CHOLERA

Bombay, India, September 22 to 29, 3 deaths
Calcutta, India, September 12 to 19, 4 deaths
Hiogo, Japan, September 19 to October 3, 9 cases, 1 death
Hong Kong, China, September 12 to 19, 2 deaths
Madras, India, September 19 to 26, 7 deaths
Yokohama, Japan, September 26 to October 2, 1 case, 1 death
Cairo, Egypt, September 15 to 21, 28 cases, 9 deaths
Throughout Egypt to date, September 25, there were 21,565 cases and 17,990 cholera deaths

YELLOW FEVER

Matanzas, Cuba, October 7 to 21, 27 deaths
Santiago, Cuba, October 17 to 24, 12 deaths
Cardenas, Cuba, October 10 to 17, 4 deaths
Quantanamo, Cuba, September 1 to 30, 6 deaths
Cienfugos, Cuba, October 11 to 18, 17 cases, 4 deaths
Havana, Cuba, September 15, to 22, 145 cases, 55 deaths
Guadeloupe, W I , October 1 to 4, 3 cases, 2 deaths

NECROLOGY

E W Wood, M D of Northboro, Mass , died suddenly September 6, aged 56 years He was born in Middleboro in April, 1840 He taught school in his earlier life, beside studying medicine He enlisted for nine months in Co C, 4th regiment, Massachusetts volunteers, and was appointed assistant surgeon under Gen Banks

Herman Hardrich, M D , of Brooklyn died October 4, aged 42 years He was of German parentage, born in New York city He graduated in medicine from the New York University Medical Departent in 1876 His professional life was spent in Brooklyn, but during the past fifteen years he had been maimed or disabled by spinal and other complications His final illness was ascribed to pulmonary tuberculosis, ending with a convulsive seizure

George B O'Sullivan, M D , of Brooklyn, died October 11, aged 30 years He was a native of that city and a graduate of the Long Island College Hospital about ten years ago He served as interne in St Mary's General Hospital in 1888 and a term in St Mary's Maternity Hospital After completing his service in the latter institution, he opened an office and in a short time built up a large and remunerative practice During the past winter he had an attack of pneumonia Although this was severe, his convalescence did not progress satisfactorily, and pulmonary tuberculosis supervened At this time he was strongly advised to leave Brooklyn and settle in the Northwest, but this he was unable, for family reasons, to do In May last, he reluctantly agreed to take a vacation and decided to spend it in the Adirondacks The climate of this section did not appear to benefit him, and his stay there was brief The midsummer was spent at New Suffolk, L I There he seemed to experience some improvement In the latter part of August he returned to the city and resumed his practice, but his strength was, however, not equal to the task and he was obliged to gradually give up his business, until toward the last he was confined to his home In his death was ended the career of a man of great promise, a career that had always been upright, honorable and useful

A C McLellan, M D , a native of Prince Edward Island and graduate of McGill University, Montreal, and the Royal College of Surgeons, Edinburgh, died at Gloucester, Mass , October 17 He was 35 years of age ——B H Whaley, M D , of Whaleysville, Md , October 9, aged 29 ——P S Carden, M D , of Richmond, Va , October 11, aged 60 ——R C Walker, M D , of Mobile, Ala , October 11, aged 59 ——John Springs Baxter, M D , of Macon, Ga , October 12 He was born in Macon in 1832 and was graduated from the University of Georgia in 1853 He received his medical degree from the Jefferson Medical College in 1856 and returned to Macon to begin the practice of medicine He enlisted in the war with the Macon Volunteers in 1861 and was made surgeon of the battalion in 1862 Later he was assistant surgeon at Richmond to the Third Georgia Hospital, then became surgeon of the Forty sixth Georgia regiment in the field until the surrender After the war he resumed practice in Macon for about a year and then went into the general merchandise business under the firm name of Jones & Baxter Retiring from business in 1873, in 1876 he became director in the Southwestern Railroad and in 1891 became its president, which position he was holding at the time of his death ——Richard Beebe, M D , of Alford, Mass , October 20, aged 72 He was graduated from the Pittsfield Medical College ——M H Raymond, M D , of Grass Lake, Mich , October 21, aged 60 He was graduated from the University of Michigan in 1852 ——Walter P Brown, M D , of Lexington, Mich , October 18, aged 43

SOCIETY NEWS

Second Pan American Medical Congress —President Diaz will receive the Congress on the 19th inst , and the municipality of the City of Mexico will tender a reception on the 17th inst Dr H L E Johnson, chairman transportation committee, has authorized the Baltimore & Ohio road to communicate in his name with persons north and east desiring to attend the Congress and make arrangements over that road connecting with the special train of the American Tourist Association at Cincinnati Dr Liston H Montgomery has arranged a special over the Laredo, Texas and Mexican National Railroad, at a cost of about $150 Stop over privileges will be allowed, and the trip will occupy about three weeks The price includes hotel accommodations

List of Honorary Presidents and Secretaries for Canada — Drs James Stewart, Montreal H P Wright, Ottawa, John Caven, Toronto, L D Mignault, Montreal, Morehouse, London, Ont , J L Davidson, Toronto, Sir Wm H Hingston, Montreal, Cassidy, Toronto, Edward Farrell, Halifax, J A S Brunelle, Montreal, T J Roddick, Montreal, Surg Major Strange, Colin Sewell, Quebec, W Gardner, Montreal F W Ross, Toronto, Adam Wright, Toronto, Grondin, Quebec, A B MacCallum, Toronto, Wesley Mills Montreal, J B A Lamarche, Montreal, Sheard Toronto, J C Cameron, Montreal, Blackader, Montreal, Burnham, Toronto, Buller, Montreal, Kirkpatrick, Halifax, A A Foucher, Montreal Chrétien Zaugg, Montreal, Stephen Dodge, Halifax, Birkett, Montreal, J C Cornil, Toronto, D Marcil, St Eustache, P Q , J E Graham, Toronto, A A Browne, Montreal, E P Benoit, Montreal, F Montizambert, Quebec, W Bayard, St John, N B , P H Bryce, Toronto, James Patterson, Winnipeg, Davie, Victoria, B C , A Vallée, Quebec, Workman, Toronto, Stephen Lett, Guelph, Ont , Burgess, Montreal, McAvinny, St John, N B , Beers, Montreal, Wilmot, Toronto, Shepherd, Montreal, C E Lemieux, Quebec, Geikie, Toronto, Adami, Montreal, A P Reid, Halifax A R L Marsolais, Montreal, Arthur Lemieux, Dentist, Montreal, Luke Lesky, Dentist, Toronto

The Medical Society of the District of Columbia —The following circular has been issued by this Society

Sir —I have the honor of transmitting to you the following preamble and resolutions adopted by the Medical Society, and to request that the action suggested therein be taken, and that the Society be duly informed of the appointment of a representative as provided for by the resolutions

Whereas, There is now pending in both Houses of the Congress of the United States, a bill, entitled, "A bill for the further prevention of cruelty to animals in the District of Columbia," which avowedly contemplates the supervision and restriction of vivisection in this District, and

Whereas, It is believed that such proposed legislation will so obstruct and limit experimental research as may seriously interrupt the pursuit and progress of biologic and medical research in this District, therefore be it

Resolved, That the Medical Society of the District of Columbia hereby invites the bureaus, departments, schools of medicine and scientific societies hereafter named, to unite with it in the organization of a commission to be constituted of one representative from each of such bureaus, departments, schools of medicine and scientific societies, which shall be known as the "Joint Commission on Vivisection," charged with the duty of investigation relating to the practice of animal experimentation in this District, and representation of the constituent organizations before Congress, in such manner as said commission may determine

Resolved Secondly, That this invitation be extended to the Bureaus of Medicine and Surgery of the Army, Navy, Marine Hospital Service, Animal Industry, the Medical Departments of the Columbian, Georgetown, Howard and National Universities and to the Chemical, Biological, Anthropological, Entomological and Philosophical Societies of the District of Columbia

Resolved Thirdly, That the expenses of the Joint Commission shall be defrayed in equal proportion by each bureau, department, school and society represented in said Joint Commission

Resolved Fourthly, That the corresponding secretary be requested to transmit a copy of the foregoing preamble and resolutions to each of the bureaus, departments schools and societies named, and request their concurrence, and the name and address of their representatives Very respectfully,

[Signed] Thomas C Smith, M D , Cor Sec'y

BOOK NOTICES

Modern Greek Mastery, A Short Road to Ancient Greek By Thomas L Stedman, A M , M D New York Harper & Bros 1896

This is an attempt to bring the English speaking medical man face to face with the new Greek, but he might as well know once for all that he can not learn any foreign language without study Such books as the one under consideration are valuable, but they can not take the place of the tutor by the colloquial method Dr Stedman says "In these days of international congresses a pressing need is felt for some common medium of expression, for few men are such masters of the three languages in which discussions are usually held at these gatherings to enable them to take an intelligent part in all the deliberations English, French and German have each in turn been proposed as the international language, but national jealousies would appear to offer insuperable obstacles to the adoption of any one of them to the exclusion of the other two The only solution of the difficu [illegible] s t[illegible] in the selection of some other language w[illegible] sally accepted without wound to the national pride of any European people Many men from Voltaire to Blackie, and others of the present day, have urged the adoption of Greek for this purpose, and of all living tongues none has stronger claims in this regard Its adaptability to the needs of international communication is shown by the fact that it is now the language of commerce throughout the Levant, as it was before and at the beginning of the Christian era, the common tongue of men of letters and of polite society in the civilized world " The author makes a good point in advocating the study of modern Greek by saying that to learn Greek by the study of the ancient classics, such as Homer and Xenophon, is like it would be to undertake the study of the English language by carefully reading Chaucer and Spenser The one who will master this book may be said to have accomplished the mastery of the language which it teaches

A Text book of Diseases of the Nose and Throat By FRANCKE HUNTINGTON BOSWORTH New York William Wood & Co 1896

The present edition of some eight hundred pages is a condensation of his former voluminous treatise

This excellent work has lost none of its practical value by covering the same ground with half the reading text of the former editions The pruning process has been rather of words than ideas, and its value as a text book for students and practitioners has been greatly enhanced Bosworth's work is unquestionably the most complete text book on the subject as yet given to the profession by an American author, and may well be considered to rank with Morell Mackenzie's classic on the same subject

Manuale di Materia Medica Del Dottore GAETANO MALACRIDO Ulrico Hoepli, Milano, 1896

L'Impiego Ipodermico e la Dosatura dei Rimedi Del Dottore GAETANO MALACRIDO Ulrico Hoepli, Milano, 1895

Manuale Pratico della Medicatura Del Dottore ADELCHI ZAMBLER, con Prefazione del Prof E TRICOMI, con 6 incisioni Ulrico Hoepli, Milano, 1896

These three publications of the Hoepli series give very fair and apparently very complete statements of the present state of our knowledge of their respective subjects, and a very handy form for those acquainted with the language The treatise on materia medica is especially full and complete for a pocket manual, so far as known we have nothing in English that approaches it in this respect, some even of the less known drugs are more fully mentioned than in the U S Dispensatory It would be an excellent work of reference for any physician and the language being an easy one to acquire, would not be, by any means, a serious objection

The volumes make no special pretense at being other than handy manuals, and for this they seem eminently suited Our Italian confrères appear to be well provided for in this regard

The Medical and Surgical Uses of Electricity By A D ROCKWELL, A M, M D Illustrated with 200 engravings, new edition New York Wm Wood & Co 1896

This work is practically the ninth edition of Baird and Rockwell's well known treatise on the medical and surgical uses of electricity, but Dr Baird has long since been dead, and has no connection with any of the revisions since the second Baird and Rockwell has so long been the standard work on electro therapeutics that any additional commentation of it is a superfluity It is sufficient therefore to say that the present edition has been brought down to date, even including a chapter on the Roentgen ray Among the new features for the book we notice an illustration of Girdner s telephone bullet probe with the method of using it, and the Cleaves' electrode for vaginal hydro electric applications, and various skiagraphs illustrative of the Roentgen photography in diagnosis It is evident that Dr Rockwell intends that his book shall be a standard on the subject for a long time as it has been conscientiously revised

A Practical Treatise on Medical Diagnosis For the use of students and practitioners By JOHN H MUSSER, M D, Assistant Professor of Clinical Medicine, University of Pennsylvania, Philadelphia New (2d) edition, thoroughly revised In one octavo volume of 925 pages, with 177 engravings and 11 full page colored plates Cloth, $5, leather $6 Philadelphia and New York Lea Brothers & Co 1896

The new edition of this work embodies the latest improved advances, newly established facts and methods in this branch of practical medicine There are many new engravings and colored plates We can repeat the favorable mention we gave the first edition of this work, and can only say that the new one will be found even more valuable We notice with pleasure that in the directions for bacteriologic diagnosis the metric system of weights and measures is used throughout the volume The colored plates of bacteria are accurate and comprehensive All classes of practitioners, general and special, are aware of the fact that they can not have too many good books on diagnosis In this class Musser's book fairly belongs A full index adds to the value of the book

A Practical Treatise on Materia Medica and Therapeutics —By ROBERTS BARTHOLOW, M A, M D, LL D Ninth edition, revised and enlarged New York D Appleton & Co 1896

The ninth edition of Bartholow's therapeutics has been enlarged, so that it now forms a volume of 866 pages The additions and alterations which have been made as a rule relate to the accounts, more or less full, of the synthetic remedies from organic chemistry, many of which are patented, but are the property of the manufacturing chemists The general character of the work is unchanged, and it continues to be, as heretofore, a standard work on therapeutics We regret, however, that the author has not revised the system of weights and measures to correspond to the new Pharmacopeia or advanced position of chemic and pharmaceutic science The old British weights and measures is still employed throughout the book This detracts very much from its value We hope to see it corrected in future editions This has been done in the chapter on Topical Remedies, Part III of the book, which is free from criticism in that respect Centigrade thermometer is also used in this portion of the work Where the formula of the U S Pharmacopeia is given, however, it is impossible for the author to avoid using metric terms, and it looks curious to see a metric term used in the preparation of the drug, while the dosage is always given in the old fashioned weights With this exception, the new revision stands the test of comparison with other works on this subject It will, we trust, continue to be a favorite for many a year, and the defects which we have pointed out are so easily corrected that we hope the tenth edition will be free from them

Biennial Report of the Board of Health of the General Assembly of the State of Louisiana for 1894-95 By S R OLLIPHANT, M D, President, Baton Rouge, 1896

This report contains the most important features of the work of the Board of Health of the State of Louisiana for the years 1894 and 1895 It is of considerable interest in many particulars Among them is the report of a conference of quarantine authorities of the Gulf with a view to securing uniformity of regulations, governing the fruit trade during the summer, and it was agreed that the representatives should maintain a medical inspection service in certain foreign ports The committee of the conference consisted of Drs Patton, Cochran and Hargiss, who recommended a modification of the quarantine laws and regulations of the United States, promulgated by the Secretary of the Treasury, April 4, 1893 On account of a disagreement between the Board of Health of New Orleans and the Marine Hospital Service, it is stated by Dr Olliphant, page 24, as Secretary, that "in January, 1894, the local representative of the Marine Hospital Service especially informed this board of his instructions to make monthly inspections of our quarantine stations The feeling engendered on part of this board by this attempted *officious* supervision is fully set forth in a letter authorized by the board " A letter addressed to the Secretary of the Treasury follows

Dr Olliphant adds "Despite our protest, the formality of visiting our stations monthly is regularly indulged in by the Surgeon in charge of the United States Marine Hospital in this city By the absence of complaint from the Supervising Surgeon General at Washington, I infer the reports of our practices and methods have proven satisfactory " Again on page 27, Dr Olliphant states that a subordinate of the Board of Health was requested to furnish a certificate of pratique by the Marine Hospital Service instead of by the Board This statement follows, and the report continues, page 29 "The President and Attorney of this Board proceeded at once to Washington and through the courtesy of our Senators and Representatives were introduced to the Secretary of the Treasury This official was not aware that any change in the regulations of the proceedings had been inaugurated We then repaired to the office of the Supervising Surgeon General of the United States Marine Hospital and discussed with him the justice of our claims, and while he did us the courtesy to promise to give the matter serious consideration, he obstinately refused to recommend to the Secretary of the Treasury to suspend this order till his decision was rendered On our departure from Washington we were assured by the Secretary of the Treasury that our claim appeared to be well founded and would receive due consideration "

On August 16, the regulations of the Louisiana Board were finally acceded to, and the report continues "It is to be hoped the United States Marine Hospital Service will desist from further interference with the quarantine affairs of the State of Louisiana When that service is prepared to demonstrate the superiority of its regulations and methods, I feel confident that this Board of Health will most gladly adopt them Till then let us progress and not retrograde "

Full accounts are given of the smallpox epidemic of 1894, and the report concludes with the usual statistic tables and a republication of the laws of the State and ordinances of the city of New Orleans in relation to health and sanitation The report is, therefore, not only valuable from the standpoint of history but as a book of reference for those interested in the sanitary legislation of Louisiana

The Bausch and Lomb Optical Company of Rochester, N Y , have issued a catalogue of unusual merit concerning microscopes, microtomes, photographic and laboratory apparatus The descriptions of the instruments are clear and complete

MISCELLANY

Prof Klebs' Article on "Tuberculosis" translated into Italian —The article by Professor Klebs on Tuberculosis, which was published in the JOURNAL, No 4, Vol 27, has been translated into Italian and appears in full in the *Gazetta Degli Ospedali e Delle Cliniche*, September 15

' Omnibus Physicians "—The *Nouvelles du Jour* announces that at Olloy, near Mariembourg, a physician has been appointed by the authorities to take charge of all the sick in the community and attend them gratuitously, for which he receives a certain salary and all expenses paid —*Gaz M de Liège*, September 10

Operation for Atresia Vaginæ —Mackenrodt (*Centralbl f Gyn* , No 21, 1896) points out that attempts to keep the artificial vagina open by tampons after operations for this condition are seldom permanently, if even temporarily, successful, and states that he has recently in two cases successfully substituted a vaginal wall by transplantation of flaps obtained in operations for prolapse on otherwise healthy women The new canal is prepared and plugged with iodoform gauze till its inner surface is covered with healthy granulations, and is then lined either by several single flaps which are kept in position by a tampon, or a lining is formed by sewing a number of flaps together around a Cusco speculum and introduced with its wounded surface external into the granulating canal, and fixed by a tampon, which in either case is not removed for eight or ten days —*St Louis Med Journal*, October

To Remove a Foreign Body from the Nose, Urethra, etc —Beugnies describes a simple arrangement with which he removes foreign bodies from small passages A hole is bored in the end of a probe and a thread fastened in it This is then introduced into the passage and carefully pushed past the foreign body The string then held in one hand and the probe in the other, the little whip thus forms a loop with which the foreign body is easily withdrawn —*Gaz Méd de Liège*, September 10

Newly Appointed Army Medical Officers —The Army Medical Examining Board, which has been in session during the last four weeks in Washington, D C , completed its work on Saturday, October 24, by recommending the appointment of eight of the candidates, in order of merit as follows Basil H Dutcher of New York, Leigh A Fuller of New Jersey, Franklin M Kemp of New York, George A Skinner of Minnesota, Carl R Darnall of Texas, Wm E Richards of Mississippi, Louis P Smith of the District of Columbia, Marshall M Cloud of Kansas

The Disinfection of Books by Vapor of Formalin —An experiment has recently been made by a medical authority in the disinfecting powers of the vapor of formalin on library books His conclusions are as follows 1 Books can be disinfected in a closed space, simply by vapor of commercial formalin, by using 1 c c of formalin to 300 c c or less of air 2 The vapor of formalin is rapid in its disinfectant action The effect produced in the first fifteen minutes is practically equivalent to that observed after twenty four hours 3 An increase in the amount of air to each c c of formalin is not counterbalanced by an increase in the length of time of exposure 4 In case the disinfection has been incomplete, the vitality of the organisms has been so weakened that they survive only if transferred in a few hours to media suitable for their development 5 The use of the vapor of formalin is not detrimental, as far as observed, in any manner to the books, nor is it objectionable to the operator beyond a temporary irritation of the nose and eyes somewhat similar to that produced by ammonia —*Health*, October 17

Change of Name —The editors of *Mathews' Medical Quarterly* announce that with the January issue of that publication its name will be changed to *Mathews' Quarterly Journal of Rectal and Gastro Intestinal Diseases* This is a change which has been deemed necessary for some time, as it is essential that the title of a medical journal should convey to the reader an idea of its contents, and this has not been the case with its name from the beginning There will be no change in the policy of the journal in the least As it will continue to be the only English publication devoted to diseases and surgery of the rectum and gastro intestinal tract, the articles which will appear in it will be limited to these subjects The journal will continue to be edited by Drs J M Mathews and Henry E Tuley, and published in Louisville, Ky

Operative Treatment of Partial Epilepsy —In the *Deutsche Medicinische Wochenschrift* for August 27, Sachs and Gerster of New York give the results of operation in nineteen cases and arrive at the following conclusions 1 Those cases of partial epilepsy are suitable for operation in which at most one to three years have elapsed since the trauma or onset of the disease 2 In depression of the skull or in other injuries to the skull, operative interference is indicated even *in after years* The prognosis, however, is less good the longer the elapsed time since the original injury 3 Simple trephining may suffice in many cases, this is especially true if one is concerned with skull injury or with cyst formation 4 Excision of the cortical lesion is advisable, if the epilepsy is of short duration and referable to an exactly localizable portion of the brain 5 Since such lesions are often only visible microscopically, excision should be undertaken even if the diseased part macroscopically appears normal Still one should, however, use the greatest caution, in order that the proper portion be excised 6 Surgical interference in epilepsy occurring in connection with infantile cerebral paralysis is permissible, if it occurs not too long after the onset of the paralysis 7 In old cases of partial epilepsy, in which very probably an extended degeneration of association fibers has taken place, surgical interference is entirely useless —*Boston Medical and Surgical Journal*

The Healing Craft Defended —The New York *Sun* has had upon its editorial staff for some years a writer whose sympathetic and intelligent remarks upon medical affairs have been much quoted in our journals, as showing that the profession is not absolutely friendless in the daily press The following short paragraph was elicited by a New York city event that occurred in the heated term of last August "Mrs S B died of the heat last night, while her husband was trying to get a doctor The medical man whom he succeeded in finding refused to attend the patient because the husband was unable to pay his fee It is seldom that a doctor violates the oath of Hippocrates, by which he binds himself before he takes up the work of his profession That famous formula defines the duties of the physician to his master, his pupils, the sick and himself With reference to the third of these the doctor promises to treat the suffering as a father cares for his children He calls down upon himself all evil if he fails in this solemn duty He prays that he may be accursed The conduct of this medical man was in direct violation of the solemn obligation But a case of this sort is only the exception that proves the rule *In no calling in life is there as much self sacrifice willingly suffered for the good of humanity as in that of the healing craft* It is, therefore, all the greater shame that any one man should forget the traditions of a noble profession "

The Late John Eric Erichsen —Sir John Eric Erichsen, who has been called the brightest literary exponent of English surgery in his generation, as heretofore announced departed this life September 23, after a somewhat sudden illness He had been in fair health and in a hopeful mood until about one week before his death Mr Malcolm Morris, editor of the *Practitioner*, has lately written briefly of Erichsen's position among his confrères "Sir John represents all that is best in the traditions of English surgery which, as Bilroth says, has since the days of John Hunter had 'about it something noble ' His career has a special interest for me, as in his early professional life he devoted a considerable amount of attention to skin diseases, on which he wrote a book which may even at this day be read with profit Thirty years ago Sir John Erichsen's operations at University College Hospital were among the surgical sights of London, which students from other schools and visitors from foreign countries flocked to see Yet on his first appointment he had had difficulties to contend with, which might have dismayed a weaker man The medical student of 'the forties' was an animal *feræ naturæ*, as different from the decorous and examination ridden youth of the present generation as Squire Western from the country gentleman of to day I have been told that at Mr Erichsen's first operation in the hospital theater one of the students expressed his disapproval by throwing a ball at his head the missile reached its mark, but without disturbing the self possession of the operator This little morning mist of unpopularity, however, speedily melted away before the splendid qualities of the man It is an interesting fact that Sir John Erichsen's first house surgeon was Sir Joseph Lister, the same post was afterward held by Sir Henry Thompson His pupils, however, are not to be counted merely by the number of those who were privileged to hear the living voice of the master, his great work has for more than forty years been turned over with nightly and daily hand by students, and constantly referred to for counsel by surgeons wherever the English tongue has currency "

Bacteriuria Treated by Internal Drug Administration —The London *Lancet*, September 12, refers to a paper in the recently issued fourth volume of the Edinburgh Hospital Reports, by Dr Lowell Gulland, on this subject Organisms, he says, may make their way into the normally aseptic parts of the urinary apparatus in four different ways 1, by spontaneous growth from the urethra into the bladder, 2, by instrumental introduction, 3, by the bursting of an abscess into the urinary tract, *e g*, from parametritis or appendicitis, 4, by transmission through unbroken tissue from elsewhere, *e g*, the rectum, and 5, by passage through the kidney from the blood Only a few organisms have been proved to appear in the urine in this way Although the urine forms an almost ideal culture medium no organism will remain in permanent possession of the urinary tract unless it is pathogenic or unless there is retention of urine Any organism will probably cause a certain amount of damage to the mucous membrane, and its primary development will thus be favored, but as the epithelium recovers, the rate of removal of the organism will exceed the rate of growth and the organism will at last be eliminated Cystitis is by far the most common inflammation of the urinary tract The ammoniacal fermentation of the urine, formerly thought to be invariable in cystitis, is only occasionally present, and, as a matter of fact, the urine in cystitis is frequently acid In reference to treatment, when the acute symptoms of the attack have subsided and the mucous membrane has recovered to a certain extent, there is still over the whole or part of its surface a layer of adhesive muco pus swarming with organisms In this condition washing out of the bladder is often most efficacious, but in certain cases it is inadmissible, and recourse must then be had to administration of remedies by the mouth Drugs to render the urine acid if it is alkaline, are useful Various germicidal remedies have also been recommended, but all of them Dr Gulland shows, are excreted in a form in which their germicide value is small He suggests, however, that although they do not destroy the vitality of the organisms they may have an effect upon their virulence either by preventing the secretion of their toxic products or by neutralizing these when formed Such a view is extremely difficult to put to the test of experiment

Mania Following Orchotomy, Successful Treatment with Testiculin —Dr A T Cabot of Boston, in the *Annals of Surgery* for September, narrates a rare case of the above description in a well preserved patient of 75 In the course of a crushing operation for stone, the surgeon removed both testes, upon recovery from anesthetic the patient began to manifest a confusional mental disturbance with exacerbations of mild mania Previous to the operation he had been mentally clear for the most part, although not free from occasional confusion of ideas The wound healed kindly and the prostate became so much reduced in size that about one month after the operation the patient passed some urine voluntarily Testiculin was then tried as a remedy for the persistent mental confusion The improvement under this treatment was prompt, and the man left the hospital about ninety days after the operation The treatment by injection was kept up about two weeks, when it was discontinued on account of the pain This is probably the first recorded case in which testicular extracts have been used in such a case as this, but the immediate improvement which followed confirms the belief that the loss of the testicles had something to do with the mania, and suggests the importance of a further trial of these extracts in similar cases Care was taken that neither the patient nor the friends should have any idea of what was being given or what results were expected, so that the possible effect of suggestion should be reduced to a minimum This would seem to be a necessary precaution in any similar trial, for suggestion is a powerful therapeutic agent in such functional nervous disorders Beside these immediate and psychic disturbances, there are other cases in which the operation has a very decided depressing effect on the general strength of the patient, leading to an amount of shock quite out of proportion to the extent of the mutilation In other cases, again, the patients have borne the operation well, the wounds have healed kindly, and still, at the end of a fortnight, or perhaps a little longer, they have gradually failed without any marked change in their symptoms and have died If a case of this sort comes to autopsy, it usually reveals a condition of pyelonephritis, and the death is perhaps sufficiently explained thereby It is, nevertheless, a striking and suggestive fact that these patients, who have been carrying the load of partially disabled kidneys for a long time, after a slight operation, which heals kindly, gradually succumb by progressive loss of strength without any evident increase of symptoms pointing to an aggravation of the renal condition This seems to indicate that, by the removal of the testes, the vital force of the patient has been diminished, and thus, in a measure, the theory of Brown Séquard finds support

Combined Vagino abdominal Hysterectomy —Gaston Hardy appeals in the *Annales de la Soc Méd Chir de Liège*, September, for a combination of the vaginal and abdominal methods of hysterectomy He advises that in every laparotomy it is wise to prepare for a vaginal operation also, and in every vaginal to prepare to open the abdomen if necessary His experience seems to have been in many cases that whichever route he followed he wished he had taken the other, and he thinks that only by combining the two can the average surgeon secure the best results under certain circumstances He advocates the removal of the uterus when both ovaries have to be ablated

Contribution to the Physiology and Therapeutics of the Kidneys —Several explanations have been offered for the fact that the xanthin series, caffein (trimethylxanthin), theobromin (dimethylxanthin) and monomethylxanthin, produce diuretic effects on some animals and not on others It has been ascribed to the composition of the blood, to the diet, etc , but an extensive series of experiments by Corin described in the *Annales de la Soc Méd Chir de Liége*, for September with a review of the subject in all its phases, demonstrates that the diuretic effect of caffein on the rabbit and its absence in the dog, is the result of a vagus tonus possessed by the dog and absent in the rabbit Hence to place the two animals on a level in this respect, it is necessary to render the vagus inactive in the dog by sectioning it or paralyzing it with atropin When this is done the caffein produces exactly the same decided diuretic effect on both animals Corin has established the fact that excitation of the vagus itself, excluding the ramifications that extend to the heart, directly diminishes the urinary secretion This excitation is without results if the animal has previously been intoxicated with atropin, which demonstrates that atropin paralyzes the vascular or other terminals of the pneumogastric in the kidneys, just as it paralyzes its terminals in the heart It is therefore to be assumed that the rabbit is without this vagus tonus for the kidneys as, we know it is without it for the heart He closes with the remark that if there is a renal vagus tonus in man, as there is in dogs, which everything tends to establish, then chloral is not to be considered the best adjuvant for caffein, but atropin or the belladonna preparations are indicated He is now experimenting on man to confirm this assertion

Teratogenesis —Ballantyne remarks in the course of an article reviewing the testimony for and against the theory that maternal impressions can cause defects in the fetus resembling the impression, that it is most extraordinary in its wide extension in time and space, and its firm hold on the minds of both profession and laity To those who wish to see it dead it is most disappointedly vital, and to those who wish to demonstrate its truth, most strikingly destitute of scientific proof He concludes that the cases of resemblances reported are merely coincidences, but that strongly marked and prolonged mental states do affect the development of the fetus Féré states for instance, that the children conceived during the sieges of the Franco Prussian war can be recognized by bodily and mental stigmata so marked that they are known "enfants du siege " The results of anxiety, insufficient food, etc , are not always teratologic, but may be of the nature of sterility, abortion, congenital debility, etc To this extent he believes in the old doctrine of maternal impressions, the one grain of truth in the immense mass of fiction, which has had a most maleficent effect on antenatal pathology The general trend in most countries is decidedly against it, except in America He mentions references to it in recent fiction, Egerton's "Keynotes," Cobban's "Red Sultan," Merriman's "From One Generation," Henty's "Rujub " Blackmore's "Lorna Doone," as well as in the "Merchant of Venice," "Tristram Shandy," "Fortunes of Nigel," and O W Holmes' "Elsie Venner "—*Edinburgh Med Journ* , October

Porokeratosis —Mibelli has recently described a new affection produced by a hyperkeratosis of the orifices of the sweat glands, which he calls porokeratosis Dubreuilh has since had occasion to observe a case which confirms Mibelli's announcement that it is entirely distinct from lichen planus in any form The child, 12 years old, has had lupus and the lesions in question since his first year They are on the hand and the forearm, and have gradually extended without ever becoming inflamed, or causing pain or special inconvenience They form an irregular track two to three centimeters wide, skipping the wrist, from the last phalanx to the elbow, consisting of hard, horny, verrucose elevations half a centimeter in height at the elbow They drop off occasionally, but grow out again at once The smallest are the size of the head of a pin, and are small, pale conical papules, the summit of which is formed by a small horny tip which projects from the top of the papule, from which it is quite distinct These are the original lesions, which began on the hand Scattered among them are a few cones from which a hair issues The largest lesions are the size of a lentil or hemp seed, and present a central corrugated surface and a surrounding crater like slope The center is horny, whitish, opaque, thick and hard, separated from the crater enclosure by a narrow, deep, circular fissure It is hard to enucleate this center, as it is tough and adherent, but when it is done or falls out spontaneously, the depth of the crater is found to be of the same horny substance After removal of the crusts the skin underneath is found normal and soft The general health is good The *Arch Clin de Bordeaux* for August contains Dubreuilh's report with a few more details

Acute Infectious Diseases and General Paralysis In an interesting article in the *Archives Cliniques de Bordeaux* for August, Delmas describes the experiments that have been made by scientists in producing general paralysis, and the conclusions as to its etiology It is almost universally admitted now that general paralysis is consecutive to syphilis in a large number of cases, which produces this effect by its toxins, as an infective disease It has also become an established fact that acute infective diseases may be followed, after a certain interval, by a confirmed general paralysis, and still more often by forms of psychopathies such as acute delirium, mental confusion, general pseudo paralysis, etc , presenting with more or less completeness the clinical character and the anatomo-pathology of general paralysis. Infection appears thus to play an important, even the principal, rôle, in the evolution of general paralysis and similar conditions, and the query arises now whether general paralysis and the psychopathies resembling it are not essentially of infective origin. He describes one case of the kind following an attack of influenza in the epidemic of 1889, and agrees with Bannister that it is doubtful whether grief or venereal or alcoholic excesses alone could produce general paralysis, while it is unquestionable that they favor the evolution of an infective disease, and thus, indirectly, the paralysis. He mentions among others Charrin's experiment with a rabbit which he kept for four hours continuously on a rotating wheel. Examination of the blood of the fatigued and alarmed animal showed it so full of microbes that one drop alone produced 800 cultures. Widal also relates the case of a rabbit inoculated two months before with streptococci, which apparently retained his usual health until he was placed with a female, when he promptly succumbed to paralysis. Many authorities quoted consider that the acute disease merely arouses a latent paralysis, but Delmas believes that the lesions discovered in the brain after certain acute infective diseases, such as typhoid fever, measles, diphtheria, etc., by Raymond, Barlow, Popoff, Voisin, etc., produce the paralysis in the same way as the lesions consecutive to syphilis.

Free Sanatoria for Tuberculosis.—The Red Cross hospitals in Germany erected in readiness for war, are to be used as sanatoria for indigent consumptives, if the experiment now being tried with one of them proves a success. There are already seven or eight free sanatoria for this purpose in the country, but their accommodations are limited, and they are "merely a drop on hot iron" in comparison with the number of persons affected with the disease (1,200,000). In 1892 Gebhard, the superintendent of the Hanseatic Anstalt fur Invaliditäts u. Altersversicherung (Sickness and Old Age Assurance), found that as a matter of business economy it was better to take charge of persons affected with tuberculosis and cure them, than to pay their indemnity in case of illness. The wisdom of this measure became more and more apparent with the increasing numbers of tuberculous persons who took advantage of the offer of the association. At first their expenses were paid at private institutions, but the association is now erecting a sanatorium of its own. The persons thus treated prevent the infection of others at their homes; they also learn the principles of hygienic living and teach them to others on their return. They are also advised in regard to change of occupation if necessary, etc. The report of 26 persons sent to Gorbersdorf by an assurance association states that after an average stay of eighty-three days, 73 per cent. were able to resume their occupations; 4 per cent. conditionally, and 16 per cent. derived no benefit from their stay. The treatment was therefore successful in three-fourths of the cases. The Hanseatic association reports 226 cases treated, with success in two-thirds; 155 resumed their former occupation; 81 are known to have continued it; 17 gave up in one to nine months and 57 could not be traced. The association is more than satisfied with this showing, as if only 29.2 per cent. resume their occupations for even one year, the amount of payments thus saved covers all expenses. It is expected that as the public becomes more accustomed to the idea, more persons will apply in the incipient stages when the disease is more easily cured, and the finances of the association benefit accordingly. Dettweiler's combined report of his private and his free sanatorium shows the results of his experience with this treatment, which he considers "very satisfactory;" in 1895, 120 patients were treated and in 10 per cent. the bacilli entirely disappeared; 24 of the rest were cured part absolutely and part relatively; 73 of the remaining 89 were improved; 9 grew worse, 2 died and 5 did not remain. The average gain in weight was ten pounds. Ascher concludes his review of what has been accomplished in various countries with the statement that nearly every canton in Switzerland is erecting a sanatorium for pulmonary affections.—*Deutsch. Med. Woch.*, September 3.

The Life of the Hospital Interne.—Dr. Charles McBurney, in a recent address, magnified the influences of hospital life in the early career of the good young surgeon. Without stopping at this time to criticize or analyze the glowing periods of the New York professor, we must say that the natural gifts of energy and industry of some of our young surgeons, without hospital privileges, will land them in a higher surgical niche than can possibly be reached by others, their more highly favored classmates, who are lacking in dash and push and wisdom. But Dr. McBurney has a right to be heard whenever he is pleased to speak upon the bringing up of good surgeons. In this connection he is reported in the *Boston Medical and Surgical Journal*, September 24, to have said: "In my opinion the most important thing in the production of a good doctor or a good surgeon, I should say, was his hospital life; that no other single part of his life compared in value to that. Whether he has his four years' course or three years' course, I look upon as comparatively unimportant. The student who has had two years' full course, and two years of good course, and then has a hospital life of two years, is, in my opinion, worth infinitely more than a student who has his four years' medical student life and no hospital experience. I would not be understood as raising a word against the increase in the number of courses, except a word of warning; but the hospital life I look upon as absolutely essential, if we would develop the fine students that we have given M.D.s to. I see that constantly year after year. They come into the hospitals as internes well provided with the fund of knowledge that is acquired by a student in a good medical college, but totally unable to apply it, totally at sea as to what they like and what they do not like, totally ignorant as to whether they are fitted for this specialty or that specialty; and I see them go out of the hospital fully developed, men that I did not expect it of in the least, fine characters, able, self-poised, ready to attack serious problems and fully prepared to become valuable members of the profession. And I look upon this as so important that I would make very large sacrifices in other directions to encourage students to have this portion of time, a year and a half or two years, allotted to them for life in a hospital. There is something about the constant contact with the patients, the constant feeling of responsibility, which is not too heavy to crush, though heavy enough to strengthen, that develops the man month after month with the greatest rapidity."

Report of the Red Cross.—According to the *Lancet*, October 3, in the thirty-three years ending July, 1896, there have been every twelve months on an average sixteen nations engaged in hostilities! On the other hand, the organization of the Red Cross has multiplied its ramifications till even such powers as Japan have fallen into line and become affiliated to the parent society, showing an example which Spain, among other countries, would have done well to follow. Having allowed the Red Cross organization to lapse shortly after the Carlist war, the Spanish government showed signs of a desire to resuscitate it, but as far as we can gather her suppression of the Cuban revolt, with all its sanguinary, not to say ferocious, incidents, has not yet been mitigated by Red Cross intervention. The most interesting feature in the present report is the anxiety Japan evinced to place her relief to the wounded on the best footing known to civilization and to make the provisions of the Red Cross available, not only for her own troops, but for those of her antagonist. Not content with the measure of success with which its Red Cross organization was worked, the Japanese government delegated M. Ariga to confer at Geneva with the central authorities of the society so as still further to perfect the system which in the late war had given so satisfactory an account of itself In marked contrast to the enlightened procedure of Japan, the Ottoman Red Cross remained inactive during all those Armenian and Cretan butcheries which have scandalized civilization, and when remonstrated with for its inhumane supineness, urged that the collisions between the Turks and their subject population being matters of domestic, not international, import, were outside the competence of the Geneva Convention When the American Red Cross, having collected large funds for the relief of the Armenian sufferers, sought to apply them to their humanitarian purpose, it was met by the same objection as a bar to its intervention, and Miss Barton, the highly efficient and skilled president of the society's branch at Washington, visited Geneva, on her way to Armenia, so as to learn from the central authority how she could turn to the best account the relief funds placed at her disposal She found she could apply them only by way of "private benevolence," not as an agent of the Red Cross, and the account she gives of her work, in a letter from Constantinople, is one of the most intensely interesting features of the present report Another important section relates to the coming *réunion* of the powers which signed the Geneva Convention, a *réunion* which will take place at Vienna next year Its predecessors have been five in number—meeting first at Paris, then at Berlin, next at Geneva in 1884, then at Carlsruhe, and finally at Rome One feature of the Vienna meeting was to have been the extension of the Red Cross organization to the calamities of civil life—earthquakes, floods, mining explosions, conflagrations, and such like It is understood that this proposal has encountered opposition at headquarters, but it would be interesting to know, in the probable event of its being revived, on what grounds so manifestly humanitarian a development of an essentially humanitarian society is to be postponed to the Greek Kalends

Army Medical School —The session of 1896-97 of the Army Medical School, Washington, D C, begins November 4, 1896 and ends March 12, 1897 The order of duties, as announced in the program issued by Major Walter Reed, Secretary of the Faculty, calls for instruction in the pathologic laboratory, daily except Sundays, from 9 A M to 12 M, in the chemic laboratory from 1 P M to 2 50 P M, and attendance at lecture 3 to 4 P M On Saturdays instruction in Hospital Corps drill and first aid is given at Washington Barracks, D C, 9 A M to 10 15 A M followed by instruction in equitation at Fort Myer, Virginia, 11 A M to 12 M Lectures are to be delivered as follows On Mondays, military medicine, by Colonel D L Huntington, on Tuesdays, military hygiene, by Major Charles Smart, on Wednesdays, duties of medical officers, by Colonel Charles D Alden and on Thursdays military surgery, by Colonel W H Forwood The hours for operative surgery and optometry will be anounced hereafter Toward the close of the session Lieutenant Colonel Geo B Davis, Deputy Judge Advocate General, U S Army, Professor of Military Law at the U S Military Academy, West Point, N Y, will give a course on military law Dr Robert Fletcher will lecture Monday, February 8, 1897, on the Army Medical Library and the methods of utilizing it Clinical instruction will be given on Fridays November 13 and 27 and December 11, 1896 and January 15, 1897 at the Government Hospital for the Insane Washington, D C Professor C W Stiles of the Department of Agriculture will lecture on Fridays, beginning January 30, 1897, on Parasites in Man There will be no exercises at the school on Sundays, Thanksgiving day, December 25 to January 1 inclusive and Washington's birthday

Hypnotic Anesthesia —Milne Bramwell concludes an article on this subject in the Anesthesia Jubilee number of the *Practitioner* with the remark "The chief objection to hypnotism in surgery is the difficulty and uncertainty in the induction of the primary hypnosis Susceptibility varies widely Recent statistics show that about 94 per cent of mankind can be hypnotized With a considerable proportion, however, many preliminary attempts are necessary, and sometimes hypnosis never becomes deep enough for operative purposes As an almost invariable rule the nervous and hysteric are the most difficult, the healthy and the well balanced the easiest to influence Some years ago when in general practice, I could usually rapidly induce hypnotic anesthesia among my own patients Now when my practice is confined almost entirely to those suffering from chronic nervous affections, I find it more difficult to obtain deep hypnosis with insensibility to pain Under these circumstances, unless grave reasons existed for the non-employment of other anesthetics, I should consider it a waste of time to attempt to hypnotize a patient for operative purposes alone Apart from this, hypnosis possesses many advantages 1 Once deep hypnosis with anesthesia has been obtained, it can be immediately reinduced at any time 2 No repetition of any hypnotic process is necessary, the verbal order to go to sleep being sufficient 3 The hypnotizer's presence is not essential The patient can be put in touch with the operator by written order, or by other means previously suggested during hypnosis 4 No abstinence from food or other preparation is requisite 5 Nervous apprehension can be removed by suggestion 6 Hypnosis is pleasant and absolutely devoid of danger 7 It can be maintained indefinitely and terminated at will 8 The patient can be placed in any position without risk, a not unimportant point in operations on the throat and mouth, and will alter that position at the command of the operator Gags and other retentive apparatus are unnecessary 9 Analgesia alone can be suggested and the patient left sensitive to other impressions—an advantage in throat operations 10 In labor cases, the influence of the voluntary muscles can be increased or diminished by suggestion 11 There is no tendency to sickness during or after the operation, a distinct gain in abdominal cases 12 Pain after operation, or during subsequent dressings, can be entirely prevented 13 The rapidity of the healing process, possibly as the result of the absence of pain, is frequently very marked He adds that numerous operations during hypnotic anesthesia have recently been reported The following are a few examples France Dr Schmeltz, carcinoma of breast, Dr Bourdon, uterine fibroid, Dr Tillaux, colporrhaphy Germany Dr Grossmann, fractures and dislocations Sweden Mr Sandberg, dental operations Switzerland Professor Forel, cataract Cuba Dr Diaz, dental operations America Dr Wood, necrosis of humerus Holland Drs Van Eeden and Van Renterghem, dental operations Many painless confinements, mostly primiparous, have been recorded in France by Drs Mesnet, Dumontpallier and Fanton, in Germany by Dr Von Schrenk Notzing, in Austria by Dr Prtizl, in Belgium by Professor Fraipont, in Switzerland by Dr Dobrovolsky, in Sweden by Dr Wetterstrand in England by Dr Kingsbury, etc

Hospitals

PLANS for the New St Alexis Hospital at Cleveland, Ohio, are now completed and the ground has been broken ——The monthly report of the Rochester (N Y) city hospital shows the number of patients admitted during the month of September, 72, discharged 60, deaths 9, remaining in hospital 70 ——In the will of Maria G Carr, the testatrix provides that $20,000 of her estate shall go to the Presbyterian Hospital of Chicago, for the purpose of erecting an annex to be known as the "Dr Wilson Carr Memorial" $2,000 is to go to the Home for the Friendless $100 to the Humane Society, and $1,000 to the Chicago Historical Society ——The board of governors of St Mary's Hospital at Passaic, N J, have decid plans for the proposed new hospital on account of the exceedingly high bids received from various contractors

Washington

WEEKLY REPORT OF THE HEALTH OFFICER —The weekly report of the health officer for the week ended October 24 is as follows The health of the city underwent an improvement of 5 per cent during the past week as compared with the week previous The deaths as reported at the health department were 110, with a death rate of 20 37 In the week before they numbered 116, with a rate of 21 48, and in the same period last year 119, with a rate of 22 46 The mortality from typhoid fever fell from 10 to 3, and that among children under 5 years old from 35, with a rate of 0 12, to 25, with a rate of 0 09, while that from diphtheria increased from 5 to 8 Except these no disease was prevalent in noticeable form Acute lung diseases remained stationary, heart and kidney affections showed a moderate increase and brain disorders a corresponding increase New cases of diphtheria 12, cards removed 14, remaining 28, scarlet fever 4 new cases, no cards removed and 8 remaining

PUBLIC HEALTH COMMITTEE —At the meeting of the Committee on Public health of the Washington Board of Trade held recently, the committee agreed to adopt and recommend the report of last year The chairman of the committee, Dr S C Busey, called attention to the fact that the board of trade as a board did not secure the adoption of any of the recommendations of last year, but that the medical practice act, the milk act and the act requiring the connection of all houses with sewer and water, had been passed through the exertions of the Public Health Committee of the Medical Society Dr Busey is chairman of that committee also

DECISION IN THE CASE OF ALLEGED VIOLATION OF THE MILK REGULATIONS —Judge Kimball on the 31st ultimo rendered his decision in the case of a dairyman charged with violating the milk regulations which were made by the District Commissioners It was charged that he failed to keep his cows clean and that he also failed to provide the feeding boxes required by the regulations The point had been raised that the commissioners had not the power to make the regulation The proof was heard several days ago, and the court held that the commissioners had exceeded their authority in requiring that certain troughs and feeding boxes should be used The court held, however, that the commissioners had the right to require dairymen to keep their cows clean and suspended execution of sentence in the case

THE EPISCOPAL EYE, EAR AND THROAT HOSPITAL —A meeting was called on the 26th ultimo to organize an ear and throat hospital under Episcopal auspices Dr E O Belt read an appeal for such an institution signed by Drs Samuel C Busey, J Ford Thompson, Thomas C Smith, G Wythe Cook, William W Johnston, Frank Hyatt, George N Acker, N S Lincoln, William H Hawkes, Robert Reyburn, H C Yarrow, T Morris Murray, R W Baker, C D Hagner, Henry D Fry, John H Mundell, T B Hood, J H Bryan, J Taber Johnson, William Mercer Sprigg, William H Fox S S Adams, W Lindin Bowen, T V Hammond, I C Rosse, J S McLain, W H Wilmer, John Van Rensselaer and E Oliver Belt The members present adopted the project and the board of governors and managers will consist of several members from each Episcopal church in the District of Columbia, the first medical board to comprise Drs T Morris Murray, J H Bryan, William H Fox, William H Wilmer, Frank Hyatt and E Oliver Belt There are also to be three consulting physicians, Drs S C Busey, W W Johnston and J Taber Johnson, and three consulting surgeons, Drs N S Lincoln, J Ford Thompson and J W Bayne There will be an indoor and outdoor department, the latter a free dispensary, open daily except Sunday The indoor department will be the hospital proper with beds for those requiring operations and special nursing The institution is to be supported by annual subscribers, and memorial beds may be endowed by persons who are anxious to perpetuate a good charity in commemoration of a departed relative

ESTIMATE FOR THE HEALTH DEPARTMENT FOR THE ENSUING YEAR —For the health department for the ensuing year the commissioners recommend an increase of six clerks, two of whom shall act as sanitary inspectors and food inspectors at $1,200 each per annum Six additional sanitary and food inspectors, who shall also supervise the collection of garbage and dead animals, are estimated for at $900 each A new engineer for the smallpox hospital at $900 is asked, as well as a clerk, who shall be a physician and act as chief of inspectors and deputy health officer at $1,800 per annum A sanitary and food inspector to assist the chemist at $600 is urged, and $500 is asked for the support of the chemic laboratory For the enforcement of the provisions of the act to prevent the spread of scarlet fever and diphtheria $6,000 additional is asked, making a total appropriation of $11,000 For the establishment and maintenance of a bacteriologic laboratory the commissioners estimate $5,000 The commissioners renew their estimate of last year of $15 000 for the disposal of the general refuse of the city An estimate of $50,000 for the purchase of a site for a hospital for minor contagious diseases is urgently recommended, and $25,000 is asked for the erection of a hospital for the treatment of scarlet fever and diphtheria

Support for the Poor of Paris—The annual budget for the Assistance Publique amounts in round numbers to the large sum of $8,000,000 Of this amount the surgical and medical personnel receives $200,000

THE PUBLIC SERVICE

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department U S Army from Oct 24 to Oct 30 1896

The following named recently appointed Asst Surgeons will repair to Washington, D C and report in person Nov 4 1896, to the president of the Army Medical School for the course of instruction prescribed in general orders No 78 Sept 22, 1893 from A G O First Lieut Basil Hicks Dutcher, First Lieut Leigh Austin Fuller First Lieut Franklin Middleton Kemp First Lieut George Alfred Skinner, First Lieut Carl Roger Darnall, First Lieut William Evans Richards

Change of Address

Battell J G from Haymarket Thea Bldg, to cor Grand and Western Aves, Chicago
Carson. J R from Henderson to Waverly Place, Nashville, Tenn
Cody E T from Chicago Ill, to Tucson Ariz
Earll, R W, from Columbus to 1015 Cedar Street Milwaukee Wis
Hayes H L from 1416 Rhode Island Avenue, to 113 First Street, N E Washington, D C
Lyen J B from Kirkwood to Salvisa, Ky Lebensohn, M H, from Chicago, Ill to Sunbright, Tenn
Moses, T F, from Urbana Ohio, to Worcester Lane, Waltham, Mass
McBride, M A from Leesville, Texas, to New Orleans La
Winterberg W from 1132 to 1208 Sutter Street San Francisco Cal
Wunderlich F W from 145 State Street to 165 Remsen Street, Brooklyn, New York

LETTERS RECEIVED

Abbott Alkaloid Co, Chicago Ill Ashmead A S, New York N Y

Bailey William Curtiss, Las Vegas N M Brown F F Advertising Agency, New York Bishop W T Harrisburg Pa Baker, Philip S, Greencastle, Ind Beegle, H B Blue Island Ill

Columbus Phaeton Co Columbus Ohio Cook, S E Lincoln, Neb Craig G G Rock Island Ill

Dvorak W J Chicago Ill

Fenn C M San Diego Cal Fehr Julius Hoboken N J

Haralson H H, Biloxi, Miss Hummel A L Adv Agency, New York, N Y Hannam, A, London England Heidner, G A, West Bend Wis

Kreider George N, Springfield, Ill

La Semaine Medicale Paris France

Merrick M B Passaic N J Moyer Harold N Chicago, Ill Manley, Thos H New York N Y Mulford H K Co, Philadelphia Pa McAllister, E B Terre Haute Ind Mechem Investment Co Colorado Springs, Colo Mather, A Paterson, N J

Oakland Chemical Co, New York, N Y Open Court Publishing Co Chicago Ill

Risley S D, Philadelphia Pa Rothgeb H D East Lynn Ill

Savage G C (2) Nashville Tenn Steiger E & Co, New York, N Y, Spencer John C San Francisco Cal

Thomas John D Washington, D C Tyson, James Philadelphia, Pa, Team J W Ridgeway S C

Wile William C Danbury, Conn Winslow, Chas E, Los Angeles, Cal Witherspoon T C, St Louis, Mo Whitmire, Z L, Urbana, Ill

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ORIGINAL ARTICLES

A FEW PARAGRAPHS ON AFFECTIONS OF THE LACHRYMAL APPARATUS

BY WILLIAM B MEANY, M D
MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, ETC
ST LOUIS MO

It will be apparent to any one who is at all familiar with the anatomic conformation of the lachrymal passages, that certain shaped appliances fashioned from a practically unyielding metal, under the name of lachrymal probes, do not meet the requirement for the purpose they were designed

We have evidence at every hand of the great injury following the passage of the probe, and the difficulty of effecting a cure for obstinate cases of epiphora, due to obstruction of the lachrymal canal

The "slitting up" or destruction of the punctæ and canaliculi, for frequent probings, the indiscriminate "plunging" and "twisting" of a bistoury or a sharp double-edged Graefe cataract knife into the tissues of the nasal duct the application of caustic, tissue-destroying agents, have not only signally failed to effect a cure but, in the majority of cases, have entailed future discomfort and irreparable damage, with little or no permanent benefit to the patient

Disease at the worst can only destroy tissue

What is needed in an inflamed mucous membrane, with a hypersecretion of mucus and pus, is something that will coagulate albumin, coagulation of the discharges, taking care to keep the processes in operation for a short time, carefully and frequently removing the coagulated matter, will not fail to arrest the progress of the disease

The patency of the lachrymal passages is as essential as that desired in the urethral canal, and in some particulars the environment of the lachrymal apparatus requires a perfect condition for the performance of its normal functions

Simple obstructions from catarrhal inflammation require only a little care in the toilet of the lachrymal apparatus

When the tears begin to flow through their natural conduits, and are poured out in the right place, in quantity suitable to the need, their useful and multiple office is performed in a way so simple and perfect that no art, however skillful, could equal it, no antiseptic lotion is as free from extraneous particles, or holds in combination better remedial agents than this secretion, why then, practice meddlesome and needless interference? We will find by careful inspection that preexisting catarrhal inflammation in the nasal fossæ is responsible, in a majority of instances, as the original cause of the trouble in the lachrymal canal its extension is easily facilitated owing to the continuity of structure

An ordinary Schneiderianitis has been known to produce more or less discomfort of the patient, by the further involvement of the mucous membrane lining the lachrymal canal, not only affecting the inferior end of the nasal duct and sac, but extending to the canaliculi, through the punctæ, producing irritation in the ocular and palpebral conjunctivæ In obstruction of the lachrymal passages due to inflammatory disturbances, the palliative or antiphlogistic plan of treatment should obtain Filling the nasal angle of the orbit with warm saline, or saturated solutions of boric acid, the gentle massage with the fingers of that part of the face over the nasal duct and sac, so as to afford sufficient aid to effect irrigation and drainage into the nose will, in the majority of cases, bring about a cure, and sometimes, if this simple plan of treatment be adopted in chronic inflammation of the sac, in conjunction with proper attention to the nasopharynx, no other treatment will be required, save in debilitated subjects

Chronic inflammation of the lachrymal sac, or chronic catarrh, is of frequent occurrence The symptoms are well known and need not be detailed here In the normal condition, the lining membrane of the sac secretes only a little thin mucus, but when irritated, the quantity of the fluid becomes increased, and its quality changed, the sac becomes distended, and on pressure a clear and thick viscid fluid exudes in many instances through the canaliculus According to some, pus is rarely seen unless there is some untoward irritation (such as may be produced by the laceration of the membrane by injudicious probing), causing ulcerations of the membrane

As a rule, there has been some chronic inflammation preexisting in the lower part of the duct and nasal fossæ, in most cases of chronic inflammation of the sac, this having led to the contraction or closure of the inferior orifice of the canal, and to this region must the treatment be directed

We have now to select a plan of treatment for the removal of the cause of the trouble By directing our efforts toward the original catarrhal condition involving the nasal fossæ and lower orifice of the duct, and the introduction of solutions of boric acid, euthymol, hydrastia, hydrozone, papain (and, should occasion require it, the 1 to 5,000 bichlorid solution carefully instilled), using an Anel's lachrymal syringe for the purpose, by gently inserting the nozzle through the patent canaliculus into the sac

Care should be taken to avoid over-distension of the sac, this can be readily accomplished by emptying the sac at frequent intervals of the fluid injected

Another method of treatment, and one which can claim prestige for a quarter of a century or more and has never been known to vary in any particular (save recently the addition of cocain, that the patient may be rendered insensitive to pain) and is employed by many surgeons up to the present time, may be correctly described as follows

The inferior canaliculus is "slit up," a metal probe is then passed down into the duct until it reaches the inner wall of the sac, often with great difficulty and the employment of much force, the patient complains of severe pain, a little blood appears, as the mucous membrane has been torn, and perforation of the membrane follows and false passages are made.

A week elapses and the same performance is repeated, and goes on from week to week, with some form of a style it may be of gold, silver or other metal, yet they fail to prevent the formation of dense cicatricial strictures in or below the sac. Obliteration or destruction of the lachrymal sac with caustics accompanies this method of treatment.

An opening made externally through the skin down to the sac affords better facilities in the treatment, and possesses many advantages over the passage of a probe, a clean incised wound in this location heals quickly and kindly and the inflammation rapidly subsides.

In cases of obstruction of the nasal duct where there has been abscess of the lachrymal sac, occurring, as it frequently happens, by inappropriate, or absence of treatment it is not uncommon to find external fistulous openings just below the inner canthus. The openings may be small or almost invisible, or at least surrounded by an ulcerated area.

In such cases it is sometimes sufficient to cure the obstruction of the nasal duct—the fistula healing without treatment; more frequently, however, further operative procedure is essential to the cure.

Formerly, it was considered good practice to pare the edges of the fistula with a fine scalpel, but this procedure often results in a visible and unpleasing cicatrix in a conspicuous part of the face.

It has been my custom, for some years past, to use the Volkmann's scoop to scrape away all unhealthy and thickened tissue that may be in propinquity to the fistulous openings and apply a pad of dry (sublimated) lint, or distilled water dressings.

When the surface to be scraped is small, this is usually followed by rapid healing without a visible scar; when the surface is large, it is customary to wait a few days until the surface presents a red, granular appearance and then proceed to graft certain minute portions of the skin taken from the patient's arm or elsewhere.

These grafts spread out, and become a center of new skin growths, to meet the in-growing circumference of the patch and usually in one week's time from the grafting, the surface will be found to have kindly healed with only the slight redness which is natural to new tissue.

These grafts grow rapidly, and thus materially assist in preventing the contraction which otherwise follows *the healing of a wound*, by covering the wound with gold-beater's skin the new growth formation may readily be observed, and the scraped surface protected from noxious atmospheric influences.

The canaliculi are occasionally obstructed with concrements of micrococcus masses that appear to have found their way *into the lachrymal canal* from their "home" in the buccal, naso-pharyngeal and laryngeal cavities. The leptothrix buccalis the chain and spiral cocci the streptothrix and pneumococci, have been found in the lachrymal canal; this canal has ever been a source of danger to the ocular and corneal conjunctiva as the starting-point for morbid growths—of which we may include pterygium rather than the acceptance of the internal deep-seated vibrio theory—dangerous perforating ulcers of the cornea and suppurative processes that have, in a number of recorded cases, caused destruction of the eyeball. The lachrymal canal is a fruitful source of infection and frequently transforms the best of operative procedures into disastrous failures.

No surgeon should neglect to carefully inspect the naso-pharyngeal and lachrymal passages, and see that morbid secretions in these passages are removed and the passages rendered aseptic, before operating upon the eye. When therapeutic measures, after a fair trial, have failed to remove the obstruction, so as to admit of proper drainage of the lachrymal canal, the introduction of flexible rubber filiform bougies, the Eustachian bougie, catgut and silkworm-gut ligatures, or electrolysis may be resorted to.

There can be little doubt that a certain proportion of cases of obstruction indicate a specific origin, the local treatment can be readily merged into the constitutional. Should tumors, dacryoliths, deformed turbinates and morbid growths appear, the therapeutic local treatment will in no way interfere with the adoption of any surgical measures that may be required.

Electrolysis is more expeditious and free from danger, and complications are almost *nil*, when compared to the passage of probes, the wearing of various forms of tubes or styles, nitrate of silver and other caustics and powerful astringents.

By electrolysis, the site of its influence can be limited to the smallest point. The duration and extent of its decomposing action is entirely under the direction and control of the operator.

The material to be decomposed by electrolysis in stenosis of the lachrymal canal is not dense and does not offer great resistance, and therefore a battery composed of a small number of cells is sufficient. A galvanometer, however, is required for the purpose of measuring the current, for different batteries have a different electro-motor force, a difference also exists in cells which have been recently charged, or which have been in use for a long time.

Two to four milliamperes will be *found* sufficiently strong current to enlarge any narrow lachrymal canal. For stenosis of the lachrymal canal, a probe made of platinum, small enough to be *inserted* into the punctum, is introduced and passed along the canal to the nasal duct; the probe is fitted into a handle, which is attached to the negative pole of the battery. A flat electrode covered with some substance that will retain moisture is connected with the positive pole, which generally is placed on the back of the neck, having been first moistened with salt water. The handle of the negative electrode has a mechanism for completing the circuit.

With four milliamperes the enlargement of the canaliculus takes place in thirty seconds, no local anesthetic is required.

In a few seconds after the circuit is closed the probe, which was at first gripped tightly in the canal can be made to move backward and forward along the canal with ease.

During the operation, a little froth collects by the side of the probe and oozes out of the punctum; this, with a sharp stinging sensation, which lasts thirty seconds, is the only discomfort the patient has to endure.

The advantages attending this procedure are chiefly due to the fact so little alteration or displacement of the normal channels is effected By it we have the means of increasing the lumen of the punctæ and canaliculi without excessive stretching which must necessarily alter the conditions of the surrounding muscular and other structures

2012 Locust Street

MATERNAL IMPRESSIONS

BY WM. F BATMAN, M.D

VICE-PRESIDENT INDIANA STATE MEDICAL SOCIETY
LEBANON, IND

The definition of maternal impressions is that a profound and sudden impression made on the mother's mind may pervert or stop the growth or cause defect in the child with which she is pregnant

Maternal influences over the young have been recognized from the earliest history of man The thirtieth chapter of Genesis gives Jacob's policy whereby he became rich He pilled the rods of green poplar hazel and chesnut and set them before Laban's herd and by maternal impressions he colored enough of the herd in ten or a dozen years to become rich.

And the next chapter tells us of Rachel's influence over Joseph and Benjamin to impress the race of mankind.

While this force has been recognized among all nations of people it is only in the last few years that an attempt has been made to separate the truisms from the superstitions on this subject In fact if you wanted the greatest superstition for ages the one on maternal impressions would linger to haunt the members of each new generation.

There are two classes of defects which have been attributed to these impressions The perceptible or bodily deformities, and the imperceptible or mental defects First, the perceptible or bodily defects, we will verify by a few well authenticated cases

I attended a multipara mother a few years ago who gave birth to an akephalous fetus The head of the child had no bones at the side and top part of the cranium The top of the head was even with the superciliary ridges and auditory meatus showing the absence of a cerebrum. The scalp was complete and well covered with hair The child was well formed and above the average in size It was stillborn. The mother believed the cause of this to be the caring for a sick dog while she was in the third month of pregnancy. But Prof. Rudolph Virchow of Berlin thinks that these cases are the result of hydrocephalus

Dr. Joseph Haven reported the following case to the Chicago Medical Society, Dec. 9, 1895: "Twelve or fourteen years ago I was in attendance upon a family in this city, one of whose members was a little girl 8 or 10 years old extremely nervous and high strung who possessed an uncontrollable fear of dogs. Anything in the canine line, even the picture of a dog would distress her. Her mother, explaining the matter to me, said that while carrying the child [illegible] she had been frightened by a dog and that the girl had inherited that fear. As the child grew older she did not outgrow that tendency. During an attack of typhoid fever in her childhood she had frequent visions of dogs so that it was often necessary to employ narcotics to quiet her. The child grew up and was married, shortly after which she became pregnant. About the sixth week of pregnancy I was sent for in a hurry. I found Mrs. D. [illegible] excited. I was told that in going out of the house a neighbor's dog jumped upon her and terribly frightened her. She was put to bed. began to flow and a miscarriage seemed imminent But she was tided over I saw her daily after that for some time She assured me that her child would be marked like a dog I tried to disabuse her mind of this idea Time went on and about the third month the same dog jumped on her again and bit her in the foot inflicting a slight lacerated wound. It was some time before I could go to the case and when I reached the house a miscarriage had just taken place I took possession of the fetus being careful that the mother should not see it On account of the peculiarity of the specimen I secured the dog that had been the occasion of so much trouble and to-night I show you the skull of the dog which I would like to have you compare with the little monster Those who believe in the transmission of maternal impressions will get some consolation from examining these specimens and those who believe such results happen as mere coincidences will have to account for this freak as best they can

Here is a case that occurred in the practice of my colleague Dr J C [illegible] of Ladoga. This case differs from any that I have known or read of the impression being caused by an act of anger on the mother's part At about the fourth month of pregnancy she was insulted by a minister She was getting a meal at the time and was in a [illegible] humor but happened to have a large knife in her hand. The minister had his right hand [illegible] resting on a table The insult was unexpected and made her so intensely angry that she struck at his fingers with the knife fully intending to cut them off which fortunately missed the mark [illegible] unharmed. A female child was born with [illegible] of the fingers amputated on the right hand, the same hand the mother used in striking

One of the most striking cases [illegible] Dr Addenbrooke [illegible] 1871. [illegible] fourth month of pregnancy [illegible] mother [illegible] was suddenly paralyzed on one side The daughters were greatly shocked and at full term [illegible] a child with facial paralysis [illegible]

We could give many [illegible] cases [illegible]

Professor [illegible]

The period of pregnancy [illegible]

somania One studied law with Lew Wallace, who said he possessed a bright mind and was gifted with oratory The other was a most efficient clerk and salesman They spent a fortune and both died a premature death, slaves to their appetite This mother told me, with tears in her eyes, that she could never blame the boys like others, for she craved whisky while carrying both of them, till she would weep with agony The father was an excellent man morally, and accumulated a fortune by his own work

James I would pale at the sight of a drawn sword, alleged to have been caused by his mother, while pregnant, seeing Rizzio cut down

One of France's bravest generals, whose courage Napoleon said was the best, became pale and tremulous when he saw a sword, caused by his father in a fit of jealousy trying to kill his mother

The following is what the *Commercial Tribune* says about the child murderer, Carl McElhinney of Dalton, Ohio "The question, is the boy morally responsible, remains unanswered Half a dozen physicians of this and the surrounding towns have labored in vain to solve the mystery of Carl McElhinney's peculiar brain At a consultation of two physicians, it was decided that the child murderer was not, and is not, mentally deranged Further facts, however, were not established Dr H R Bittein, one of the examiners, propounded a theory based on anterior conditions Said he 'This is only a theory, and is presented merely to help a solution of the mystery of the mental condition of seven-year-old McElhinney, and is not to be taken as my final conclusion I have some belief in the inheritance of mental idiosyncrasies Both Mr and Mrs McElhinney were of sound and healthy mind However, at and before the birth of Carl, I believe, Mrs McElhinney's mind was not in an easy, natural and normal condition This might account for Carl's singular mental formation Before Carl's birth Mrs McElhinney was an assiduous reader of novels Morning, noon and night her mind was preoccupied with imaginative crimes of the most bloody sort Being a woman of fine and delicate perception, she appreciated to an extent almost equaling reality the extravagant miseries, motives, villainies set down in novels, so that her mind was miserably contorted weeks before the birth of her child Carl The boy was an abnormal development of criminality He has a delight in the inhuman It takes intense horror to please this peculiar appetite Murderer Holmes was such a being, but even he did not show his tendencies before maturity I believe criminal record does not show a case so remarkable as this As the boy matures these mental conditions will mature He is dangerous to the community, and I doubt that even a severe schooling in one of our severest reformatories would better his condition However, by all means, he should be sent to one"

Wars or any tumult in society that may excite fear, anxiety or grief in pregnant women are dangerous The instance of idiotic and stillborn children to the number of one hundred being born near the great siege of Landou in 1793 proves this

We, as scientific physicians, who Dr Victor C Vaughan says are one hundred years in advance of the politician, should teach our patrons how to care for our pregnant women and the danger from maternal influences The Spartans bred warriors, and I believe this generation can breed a better people One of the future advances to help the generations to come, will be to teach them the power of mat influences, with better care of our pregnant wo This, with a proper knowledge of the danger hereditary diseases in marriage, will strengthen th human race

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EVOLUTION OF GIRLS

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

BY HARRIET E GARRISON, M D
DIXON ILL

The question whether man has ascended from the monkey or descended from "a little lower than the angels" does not matter in the present discussion, also whether women have passed to a higher or lower plane in the evolution of our higher woman, whether it is a higher sphere to wield the keen, logical brain of a Maria Mitchell or to be the mother of a host of well trained sons as Cornelia, is not pertinent to the present subject For the reason that popular opinion, before which we all fall prostrate, says woman's brain, whatever its capacity, must be made to hold a certain amount of book lore which we call an education Sometimes when we have this erudition applied we think with the poet, "Knowledge comes, but wisdom lingers"

"Go on to perfection" is the motto written above every scientific laboratory door, and one of the most weighty problems for the scientists now to solve is, how can the little tiny mite of brain force, which has just given its first feeble wail of protest against the tremendous activity of the nineteenth century, be evolved into the vast intellect which she must have when she becomes a higher women, with the least loss of nerve force?

The majority of our women are the victims of nerve exhaustion How can it be prevented? If child nurses can only be taught to watch the promptings of nature and assist her in her work the task of developing infancy into perfect womanhood would be a comparatively easy one But the mother usually wastes all her nerve energy in useless repining from the time that she believes a new spark of life has been kindled until the anguish she dreads has been endured, or she is spending it in a vain effort to have a perfect child One of our very highest women, a university graduate, said to me when I was called to prescribe for her three-weeks old baby, "I was so anxious to have my child well born that I studied and practiced every detail of diet and mental gymnastics laid down in tokology and several kindred works, but I almost died when baby was born, and here he is, as you see, continually unhappy He has been fed at the breast under the guidance of a trained nurse recommended by my physician, and her regimen has been very exacting The only time the child seems comfortable is when he is disrobed for his bath, although the clothes have been made and are worn according to the directions sent out by one of the largest sanitariums in the country" "Well, my dear madam," I replied, "you were so anxious to have your child well born that he has gone clear back to the state of primeval innocence of the Garden of Eden If you had rested your brain by pleasant reading, eaten what was wholesome and nourishing, in reasonable quantities at accustomed times, and then allowed nature to care for it without spoiling her work by torturing yourself with imagining that the food would injure you or your child, and had kept your physique in good condition by light, agreeable exercise, most of it taken in the open air, or, as a résumé, taken life easy and trusted in Providence, you might have stored up sufficient nerve force to have made your labor more easy and your child would certainly have been in as good condition as he is now, and my experience says he would have been in a better condition than he now is "

The purpose of this article is not to call attention to the clothing and diet necessary to develop healthy girls, but to point out some of the things which have been overlooked in their evolution

We will now glance at some of nature's indications for development The cells which control the higher attributes are located in the anterior lobes of the brain, while those which control the animal functions of the digestion and motion are in the posterior or central part The natural mechanism of labor compresses the anterior lobes into the smallest possible space, while the other lobes undergo less pressure This is made possible by the largeness of the anterior fontanelle as compared with the posterior In this way nature takes care of what is necessary for the child, and in other ways provides for future development of the higher attributes Modern scientific investigation teaches that for the first few years of life the brain can be changed and the different attributes helped or hindered in their development Brain material, like everything else, must have room to grow and there can be no growth in a part that is compressed It is easy to tell in almost every child, when a few months old, by the shape of its head if it has been kept a very long time in one position The side or part upon which it has been lying will be flattened Nature teaches that a girl is first a pronate, then a four-footed, after which she becomes an erect animal If the girl is allowed to follow the dictates of nature the higher brain will develop as she slowly evolves from one type to another But here our civilization steps in and instead of allowing the embryo woman to develop along nature's line and be allowed to squirm, kick and roll through early infancy, she is forced into all manner of unnatural positions by pillows and props As our girl is not allowed to develop the front brain naturally, we must instruct our nurses to assist the development by frequently placing her pronate with the head lower than the chest This can be done by placing the child across the knees of the nurse with the head projecting beyond and hanging slightly down This is the position which colicky babies so much enjoy Perhaps colic is due to the blood being in the abdominal viscera when it should be developing the higher attributes of the brain, hence the relief when it is sent where it belongs

The more cultured the family into which our girl is born the less she is allowed to take the exercise intended by nature for her proper development From birth she is held in as nearly an erect position as possible and propped into a sitting posture by pillows and that instrument of torture, the high chair, in which so many weary hours of childhood are passed I frequently find little girls who have never resumed the recumbent attitude, except when asleep, since infancy and the mother says with pride, ' my little daughter never crept like common girls ' We hope in the future we will have more "common" girls When the child is sleeping she must be crowded around with pillows for fear she might attempt to use her muscles and roll over and give an ungraceful kick when the nurse is not by to curtail the movement As soon as possible baby is placed upon her feet and encouraged to walk to show how smart she is This craze for smartness is the curse of this age

In girls the evolution from one type of animal to another should be made slowly, not alone to give the higher brain a chance to develop by the pronate posture and the position required in creeping, which makes the anterior lobes the most dependent part, but also that the uterus and its ligaments may be properly developed so that they may stand the strain brought upon them when the girl assumes an erect posture From my study of the development of the uterus I expect and have demonstrated by examination, that a girl who has never learned to creep has a flexed or infantile uterus In creeping, the pelvis being higher than the chest, the force of gravity carries the intestines toward the diaphragm, and in this way pressure is removed from the undeveloped uterus and it unrolls and assumes the normal position A girl naturally creeps a little space, rises to her feet by some object of support and then drops to her hands and begins creeping again, in this way alternately relaxing and stretching the uterine ligaments Could there be a more perfect way to strengthen ligaments of any kind

But our evolution has carried our girl through the necessary kicking, rolling and crawling of infancy, on the floor in winter and out of doors in the sand pile or on the seashore in summer, to girlhood She has not been kept in one position long enough to allow compression of any organ, and if for any reason there seems to be a lack of development anywhere we have used all means, by posture or otherwise, to send a good supply of blood to more fully nourish the weak part

We do not now seek to unduly develop the brain to make her brilliant, as force-plants are short-lived, but we urge her to rival her brothers in all out-door sport which will develop vigor of limb and strength of muscle, then she is as nearly fitted as possible to enter the high school, to go through the cramming, jamming process to reach what we call an education This process crushes out the lives of many of our sweetest and best girls, but no matter, our school system must be preserved at any cost

Our evolution has developed our girl into such a little perfect animal that she may endure (although I wish it were otherwise) the strain of sitting on a bench at a desk for long hours to have crowded into her brain material which must be jammed out again, because, forsooth, the brain is not large enough to contain it all, and in the haste there is not time for each cell to grasp the part which it should store, before more is given it to do Occasionally we find a child whose brain will store all given it, but in most cases it is a dismal failure

Can not some social economist evolve a plan by which the brain can be fed and developed to think and reason without this great waste of nerve force? Counting this loss alone the cost of our school system to the State is something enormous, and not in any way commensurable by the results attained But if our girl must go through this grind she must be prepared for it in the best way possible

To supply the higher brain so that it may not suffer unduly we must suppress other nerve activity A great deal of nerve energy can be economized by delaying the evolution from girlhood to womanhood

This can be done by proper hygiene and medication All sensational literature should be excluded from a girl's library

Girls should become accustomed very young to cold plunge baths A few minutes' rest after returning from school, lying down with the pelvis on a higher plane than the shoulders, or in the knee-chest position minimizes the effects of the prolonged sitting in the school room Plenty of vigorous exercise in the open air is needed to expel the school room dust and carbonic acid and invigorate the blood by the deep draughts of oxygen, which spirited exercise carries into the remotest recesses of the lungs We see no reason why race running, rowing contests or ball playing should be given over to the boys In these the element of contest adds more vigor to the game, but in school contests which bring the girls at an early age before the footlights there is no compensation for the undue excitement, and therefore is to be deplored If military drill is beneficial to the boy, then it is doubly so to the girl, as her organs sustain more injury if she does not walk right and carry herself properly, and the girl is in more need of the discipline, as one of the evils of the present method of girl-raising is the absence of control Bicycle riding is yet too new an experiment for us to fully determine whether it would be beneficial to growing girls or not We think it might be if taken in moderation and proper position, but it must be injurious if carried to excess or taken in the stooping position with an improperly arranged saddle We can see how it may be beneficial in developing self-control Girls are allowed to think it womanly to scream and become hysteric at every trivial incident If learning o ride a bicycle will correct this it will have done a grand good work

Medication If the lassitude and indisposition to work, with the wearing pains which sometimes accompany the evolution from girlhood to womanhood, begins to appear, then use calmatives such as viburnum prunifolium, cimicifuga racemosa, and above all I have found helenin, the alkaloid of inula helenium, especially valuable in controlling erotic excitement Above all teach the mother that it is not necessary for her little immature girl to be subject to this nervous strain every month, but that it is necessary that she be kept strong and well

DISCUSSION

Dr **C G SLAGLE**, Minneapolis—If the advice of that paper were heeded we would have fewer delicate girls Too much novel reading, too much "culture and refinement," as they call it, causes too great strain on the nervous system There should be very little difference between the sports or pastimes of girls and boys up to the age of 10 or 12 Until then the girls should be allowed more freedom, within proper limits than they usually enjoy Their nervous system should be better protected This thing of forcing babies to be smart, forcing development, intellectual development especially, is certainly very dangerous I think there can be no question that if most of our nervous, weakly girls could be induced to use the bicycle in moderation it would be very beneficial The best article upon this subject was written recently by a celebrated doctor of London He contends, bicycling in moderation, with the proper saddle, in the erect position, is beneficial to most and particularly to delicate women In Minnesota, the climate of which is generally considered *very healthy, we have* considerable chloro anemia I find from the history they are too passive, have been pampered and petted too much, allowed to have their own way and not given exercise Their energy is gone, if they ever had any, so you can not induce most of them to ride the bicycle They want to lie in swings and read light literature Their is something about higher civilization particularly enervating to girls

Dr **EDWARD H SMALL**, Pittsburg, Pa —If any of your patients, particularly girls, speak to you about bicycling, tell them to always have the handles at least two inches higher than the seat, then the rider can not lean over Tell the girls to keep their arms well back and then their chest can not be hindered in development In Pittsburg most of the girls ride bicycles, skate, etc , and chloro anemia is not frequent

Dr **A C COTTON**, Chicago—I have not thought before of the children developing the anterior lobe by creeping on the hands and feet Often the baby is undoubtedly relieved of some discomfort by being laid over the knees with the head dependent Yet you know you can hold the baby to the shoulder and by applying pressure over the abdomen the pain will be relieved

Dr **HARRIET E GARRISON**, Dixon, Ill —I hoped to be able to present some photographs of children I have been developing along this line They have very well developed heads This should not be overdone, but there is certainly a great deal in the position of the child in early life

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HIGH PRESSURE PROCESS OF TEACHING IN OUR PUBLIC SCHOOLS CONSIDERED FROM A MEDICAL STANDPOINT

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY W H SHORT, M D
LA GRANGE IND

There are different temperaments and organizations in our school children, and of necessity it would be impossible to adopt any method of teaching that would reach all in a satisfactory manner, no one course or routine would be perfectly satisfactory to the highly nervous child and apply equally to the lymphatic and sanguine temperament But we ought to be able to so conduct our schools that we may do the greatest good to the whole number

Our present school system is a high pressure process with a constant tendency to add more branches, so that little children have five or six studies and with department method, as many teachers Children of eight or nine years of age are urged to high intellectual effort and are expected to master studies which a few years ago were only attempted by children fourteen or fifteen years old Are we thus doing the best for the coming men and women?

We have certain unmistaken effects among our school children, and there must be a cause Who originated such an elaborate course and what was the object?

It evidently was not by those who were competent to judge of a growing child's endurance Writers and publishers of our text books are influencing our legislatures to inflict such herculean tasks upon the youth of our land We readily see why this course is being adopted so generally Shall we stand idly by and allow the children to be thus wrecked mentally and physically?

Can a little child study five or six branches and comprehend them? And if he can not and is oversensitive, will it not affect his nervous system and secondarily his whole organization?

Can the scholar develop into a well organized being by thus overpowering the child with so much brain work? *We have often observed this trying ordeal* among the nervous class, during monthly examinations, the scholar becomes restless at night, fails to take sufficient nourishment, becomes constipated, complains of being tired with a constant headache which in its incipiency, is generally relieved by rest and out-door life There are many causes in and out of the school room which have a tendency to increase certain diseases, but our present school system increases nervous diseases with all their horrors, often worse than death, and often close in the wake of disordered nervous systems follow tuberculosis which ends the school work of many who promise so much in early life

The highly sensitive are in great danger from overwork, while those less susceptible do not worry and thus retain their balance, recuperate and throw off influence of school and studies, as soon as at play How different with the nervous child, who when overtaxed can not throw off anxieties and is constantly expending his nervous energy We first have slight ailments to treat, but soon the child does not recover from his trouble so easily The headache becomes more persistent until we finally have congestion of brain, epistaxis, increased digestive trouble with more or less anemia With the child thus affected his work becomes more irksome and he now requires urging to keep up with the classes Repeated attacks soon produce a weakness of blood vessels and nerve centers so that slight causes precipitates one of these attacks

Such children soon become restless and emotional and easily excited or depressed The girl is now in a condition to be easily afflicted with hysteric trouble which we have so often seen as a climax of school pressure, and the boy thus goaded on does not fare better, for he is in danger of resorting to habits that endangers soul and body

There can be no doubt that when the sensitive are thus over-worked, we frequently have the epileptic trouble developed Even if we do not have such serious trouble follow, many are so affected that they are unhappy and unable to compete in life's great battle Many of our school children are obliged to wear glasses and this is largely due to this same high pressure process

The eye must have rest, and the child who is compelled to work hard during school hours and until late at night can not thus accommodate it Thus, not only one organ or *function* becomes involved by this great strain upon the developing child but every part of the organization is not only endangered but many valuable lives sacrificed in order to satisfy a false delusion called education With the present tendency to keep adding more branches each year to our course of study we will have more irritable brains to treat with all its sequelæ

Have any of our really great and strong men or those who have achieved greatness been thus educated? Some of our greatest men only had a knowledge of the common branches, until well matured, and with some practical knowledge of life, a good physical organization and an abundance of good common sense were enabled to honor the highest positions that fame and fortune could willingly and justly bestow

The present over-pressure process of teaching is having a deleterious effect on our school children in many ways Not only is disease thus produced directly but we are injuring their reasoning powers in not allowing them to develop into strong physical beings A child thus overtaxed may arrive at manhood, or womanhood but will never be able to compete with those who are allowed to develop mentally and physically co equal The child who is carefully taught only such branches as his mind can comprehend, and new studies undertaken only when he is competent to understand them will, *other things being* equal, accomplish more in the literary world or achieve greater success in other spheres of life He will be saved untold suffering and not become a burden to our commonwealth If we continue to crowd our children through the public schools without reference *to their physical or mental ability* we must increase our burdens for many are drifting into our public institutions for treatment

If we do not call a halt some will have to seek knowledge in schools for the blind, others find refuge in our asylums for the insane, while we will be obliged to establish an institution for a class of nervous individuals who will become so vacillating and unbalanced, that society will not tolerate them

We are having more cases of acute tuberculosis among those who are lowered in vitality by this overpressure They can not resist or throw off *ordinary* diseases as they ought As we observe so many falling by the wayside, unable to complete a satisfactory common school course, owing *to our present mode* of teaching, we are assured our system is too complicated and obscure, and should be so remedied that all may be enabled to take a course that will fit them for the ordinary vocations of life

Our teachers should be men and women who understand human nature and be able to develop the scholars' faculties without promise of reward or menace

The child who is always on a high tension from such influences can not do good work mentally and is injured physically If this high pressure process continued through the growing child's education, it must cause a great sacrifice to our coming men and women While if our school children are developed by a judicious course they will attain the greatest success in the various vocations of life

As physicians and philanthropists we should interest ourselves in this method of teaching and ascertain if a better way is not feasible, and while trying to remedy this great evil, not lose sight of the many other causes that are working deleterious effects among our school children We assert that if the children are allowed to develop co equal physically and mentally, and only as their delicate organizations will permit, they will become stronger men and women and thus help solve one of the great problems of the coming century

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A CASE OF DOUBLE EXOPHTHALMUS

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY H BERT ELLIS, M D

LOS ANGELES, CAL

At 1 45 P M , Feb 11, 1895, I was summoned to see a man The demand was urgent as the patient was "bleeding behind his eyes" Before 2 o clock I arrived at the place and found the patient on his back on the floor, with blood trickling from both eyes and ears The right eye protruded from the socket, beyond the lids, the left also protruded from the socket, but the lids covered most of the ball, the palpebral slit being open only about a quarter of an inch The intraocular tension of both globes was of stony hardness and the pressure from behind on the balls was so great they could not be made to recede at all, and this pressure was so uniform that voluntary movement of the eye in any direction was impossible The displacement was directed forward, the eyes looking straight in front Both anterior chambers were filled with blood, completely obscuring the irides and pupils Blood was oozing from all portions of the conjunctivæ, but there seemed to be more hemorrhage beneath that portion which lay in the horizontal diameters of the balls, the most profuse being between the external canthi and the corneæ It was my first impression that there was a double aural hemorrhage, as blood seemed to be flowing from both external auditory canals But neither the man's position nor condition was favorable to a careful examination at the time

No evidence of traumatism had been found, excepting a slight bruise on the forehead where the man had evidently struck the floor, when falling from the lounge I could find no signs of violence

The history of the case prior to my arrival was briefly as follows Mr M, aged 35 years, who had been in the block some nine to twelve months, was temperate and spent most of his evenings in his rooms reading For the past three weeks he had been drinking to excess, and for ten days had been intoxicated On the 8th he commenced to sober off (taking as he afterward told me 12 ounces of Fellow's hypophosphites in two days) Becoming very nervous and restless on the evening of the 10th, he called in Dr Clark, who administered ½ grain of codein, which produced a good night's rest Monday morning, without the knowledge of anyone, he sought the nearest saloon, where he obtained whisky, the exact quantity is not known, but it probably was not very much, for at 12 45, when Dr Clark called, he was apparently sober

At 1 10 P M he seemed quite well, but nervous, at 1 15 P M the people in the vicinity were startled by loud and agonizing screeches The proprietor of the block at once summoned Dr Clark, who was in the building They found Mr M on the floor, on his knees and elbows, with a finger in each ear, shrieking with pain Blood was flowing, apparently, from both eyes and ears, and the eyeballs were protruding Dr Clark put him on his back and gave him a hypodermic of morphin, ¼ grain This quieted him in a few minutes When I arrived his pulse was 150, regular, but rather weak, respirations 16 At 2 30 he was given another ¼ grain of morphin, his pulse dropped to 120 He was quiet and his brain, at all times, was sufficiently active to answer all questions intelligently, and he retained perfect use of all his voluntary muscles The diagnosis was uncertain

Fearing some exacerbation of pain or further hemorrhage, he was put to bed without being undressed, and given 1 dram doses of fluid extract of ergot every two hours, ¼ grain doses of morphin, to keep the pain under control, and 1-100 grain doses of digitalin, hypodermically, to slow and strengthen the heart's action Locally, hot cloths wrung out of boric acid solution were applied

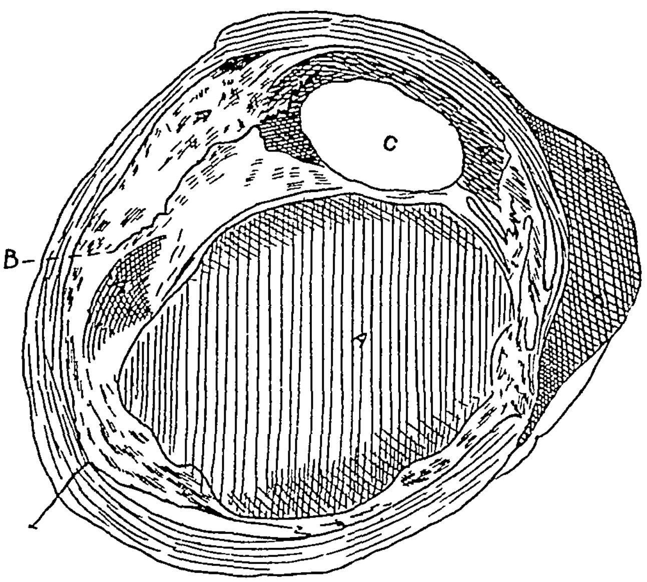
At 4 P M I again visited the patient At this time both eyeballs were outside the lids, no motion of balls, but on attempting to move them, there was the faintest movement of the left upper lid Tension + 3, hemorrhage the same as at first visit, an oozing from the conjunctivæ An unsatisfactory examination of the ears showed a perfect right tympanum and in the left a mere point in the anterior inferior quadrant, which looked as though it might be a perforation

On the 12th the eyeballs were beginning to recede and to soften a little Another examination of the ears was made, which decided that the point was not a perforation but simply a spot between calcareous deposits in the tympanum

Until this point was decided I had not been able to hazard a diagnosis, but with the decision that the blood which apparently came from the ears was only that which had flowed into them as it trickled down the face from the eyes, I felt that the diagnosis was simplified At first I thought that there had been an aneurysm of each of the orbital arteries which had ruptured almost simultaneously, due to stimulating effect of the whisky and strychnin

In the second place, it was possible for an aneurysm of the right orbital artery to exist just after it branches from the internal carotid, within the cranial cavity but extra-dural This would cause pressure in the right orbital cavity first and later in the left, as the flow of the escaping blood would be in the direction of the least resistance This theory as to the origin of the trouble at once raised the question If the hemorrhage was intracranial why did we not have brain symptoms, a slow pulse, impairment of motion to some extent or in some part of the body, disturbed sensation or a clouded intellect? Instead, we found a rapid pulse, 150 at the time of the accident, 120 later in the afternoon, 100 the next day Motion was perfect and no disturbed sensation His intellect, while not at its best, was very far from showing indications of a brain lesion He would answer questions briefly but clearly, his memory, in so far as the accident was concerned up to the 14th, was practically a blank From an anatomic standpoint, however, I believe it would be possible to have an extra-dural hemorrhage at this point, if the dura mater were sound, which would cause pressure only within the orbital cavities On the morning of the 14th the eyes, although causing a hideous expression, had receded considerably, had lost their great tension, and the conjunctivæ and corneæ were breaking down, in fact, pus was present in the anterior chamber of the left eye, but the man's physical condition was growing worse Fever in the afternoon, pulse rapid and irregular, considerable distress about the orbits but not amounting to actual pain, he was suffering most from his excessively nervous condition

I advocated the removal of both eyes at once and performed a double enucleation on the 15th After the operation he began to improve in general vigor, and March 9, about a month from the the date of the accident, he started for his home in Ontario, wearing a pair of "enamels" and feeling as well as he had in years A couple of days after the operation he gave me the following history He was a Canadian, single, 35 years old His vision had always been good, but he had suffered periodically from nervous headaches and occasionally had severe pain in left side of head For six or eight years he had had an external and internal pterygium of left eye Occasionally he became intoxicated and on such occasions both eyes would become very much congested and the mucous membrane seemed to extend out over the cheek but when he would abstain from stimulants his eyes would become normal One year previous to the accident, while at Seattle, Wash, he had been on a protracted spree, which ended in a condition similar to that for which he sought Dr Clark's services He was then treated for acute mania and was restored to his normal condition in a couple of weeks After his attack in Seattle he drank no spirituous liquors for a year, and had on previous occasions abstained four or five years at a time, for he had found by experience that he could not use liquor at all without using too much During the past year he had been using Warner's Safe Cure, thinking that his kidneys were out of order For the past three months his health had been poor, everything that he did required an effort and ten days before the accident in order that he might keep up with his work he took some wine In a few hours he was drunk from the amount of port wine and whisky that he had imbibed, and for seven days remained intoxicated, eating nothing, at the end of that time he drank four bottles of ginger He was cold to his knees, his jaws were set and he could not move his arms After the first drink he seemed to be irresponsible and had no idea of how time passed After the seven days spree he stopped drinking absolutely, but was troubled with hallucinations and illusions, against which he struggled for twenty-four hours Sunday morning he was feeling so weak and miserable, with no passage of the bowels in five or six days, he commenced on a bottle of Fellows' hypophosphites and in twenty-four hours had used 12 ounces of it, which represented 1 3 5 grains of strychnin Sunday night he was still feeling so distressed that he called in Dr Clark, who gave him sufficient codein (I believe) to assure him a good night's rest Monday he was very excited, and when they brought soup to him at 1 o'clock he would not eat because he thought it was poison While lying on the lounge he had a spasm of the stomach and with the spasm a blackness came over his eyes, he fell from the lounge, but saw the carpet as he fell He thought that he had gone to hell and that his brain was full of little devils With the great pain of the spasm he lost control of himself and he tried to get his fingers into his brain through his eyes, but that caused so much pain that he tried to reach his brain through his ears, then he recollected nothing more till an hour and a half later



A, hemorrhage B, choroid and retina, C, lens Retina was also found in hemorrhage

After the eyeballs were removed they were hardened in Wickersham's solution and later in formalin They were carefully cut, stained and examined microscopically by Dr Alex Bruce of Edinburgh Both the eyes were practically the same, and the accompanying diagram is a drawing from one of the sections This shows the parts very much displaced, the aqueous and vitreous spaces filled with blood, subconjunctival hemorrhage and blood separating choroid and retina from the sclera, with parts of the retina in the hemorrhage But this gives us no definite information as to the cause of the accident The pathologist after hearing the imperfect history writes that "the condition was a result of a sudden thrombosis of the sinuses, and of this condition I understand there are some cases on record "

Personally, I am unable to explain the cause of the conditions satisfactorily, although I incline to the theory of his having gouged them out with his thumbs or fingers, but if he did I do not understand why the intra-ocular tension should have been so great If due to double aneurysm, why was there no aneurysmal bruit and no pulsation, and if due to double thrombosis of the sinuses why should there not be more general disturbance?

REMARKS ON THE CAUSES OF GLAUCOMA

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY LEARTUS CONNOR, A M , M D
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Judged by its literature, the causation of glaucoma is unsettled No effort to harmonize undoubted facts has met with general support Whether glaucoma is a deformity or a disease, remains an open question Thus Priestly Smith and his followers claim that glaucoma is a deformity of the eyeball, that an engorgement of the blood vessels in the posterior chamber pushes forward the lens and crowds the ciliary body and iris into the anterior angle, effectually blocking the outlet from the eye for the intraocular secretion From the resultant intraocular tension he deduces the phenomena of primary glaucoma The failure of this view to account for glaucomatous attacks in the young, in persons having no iris, in cases of intraocular tumor or dislocated lens, etc , has prevented its universal acceptance

Of those holding that glaucoma is a disease, part affirm that it is purely local, and part that it is the local expression of a constitutional affection

Von Graefe called simple glaucoma "amaurosis with excavation," regarding it as quite distinct in origin and course from glaucoma Iridectomy failed to exert any appreciable influence upon its progress, in contrast with its wonderful power in checking the destructive force of acute inflammatory glaucoma

Previous to his time glaucoma was regarded as a local inflammation, and treated with antiphlogistics, or as an arthritic disease, the result was the same in either case, viz total loss of vision Not content with the empirical fact that iridectomy would cure a glaucomatous outburst, ophthalmologists have sought out its mechanism and the processes leading to it The questions raised by this study are most intricate, far-reaching and difficult of solution Thousands of workers have each contributed something of a positive or negative nature, but much still remains undone. The object of this paper is to briefly discuss a few points bearing upon the causation of glaucoma

1 An obstruction to the outward flow of the fluids

in the posterior chamber is the most uniform characteristic of an acute glaucoma. Hence the importance of a clear idea of the normal flow of these fluids, and the changes made by the glaucomatous disease. The course of the blood is readily determined, in health, by the course of its vessels. Elaborate experiments have seemed to show that the oblique course of the efferent veins, through the sclerotic, combined with such disease of the veins as partially occluded their caliber, obstructed the outflow and so increased the intraocular tension, but this view has not obtained large recognition. That a variation in the caliber of the blood vessels does occur in glaucoma is evident, but all the facts seem to place these secondary to obstruction to the outflow of the secretions.

Knies, Webber and others have experimentally shown that the aqueous is secreted in the posterior segment of the eye and passes anteriorly through the connective tissue of the circumlental space, Fontana's spaces, Schlemm's canal, and the sclerotic into the capsule of Tenon. In this course the outflow is through connective tissue, and tissue matrix, not reaching spaces lined with epithelium until it enters the capsule of Tenon and the efferent lymph spaces of the subconjunctival tissue. Knies has shown that dissolved substances may in addition pass through the lens capsule and Descemet's membrane, but not formed or solid matters. Posteriorly, he has shown that the secretion of the posterior chamber escapes through the connective tissue spaces of the optic disc. The obstruction to the outflow of this fluid by a change in its nature has been the subject of elaborate experiments by Knies as detailed in *Arch. Oph.*, Vol. xxiv. Aseptic irritants were injected into the posterior chamber, that formed coagula in the secretion which obstructed the outflow spaces, producing an increase of ocular tension, dilatation of the pupil, and cloudiness of the center of the cornea. On removing the eyes he found both anterior and posterior outlets obstructed by the changed secretion. Hence he thinks that glaucoma is an irido cyclitis, that secretes a noxious fluid which clogs the meshes of the outflow connective tissue spaces. Experimentally this change of the secretion in the vitreous was temporary, but in the irido cyclitis of glaucoma, he thinks that the secretion of noxious fluid is of longer duration and so the symptoms of glaucoma longer continued.

The study of glaucomatous eyes which have been removed before total destruction, has shown an actual change in the connective tissue spaces of the outflow channels. The fibers have been found thicker and shorter, encroaching upon the spaces, and often entirely obliterating them. It is not possible to remove an eye in the early stage of glaucoma, or to find one in a person dying of acute disease, but in those studied nearest such a time, the changes in the outflow spaces have been found. Other changes have accompanied these, but we pass them for the present as we desire to state the fundamental idea in its simplest form. When we examine carefully the persons having glaucomatous attacks, we find that in many there is evidence of gout, either acquired or inherited of rheumatic gout, rheumatism, syphilis, of those whose entire bodies have been surcharged during many years with badly assimilated products. In many of these we find evidences of interstitial diseases in other organs than in the eye. It is quite fair to infer that the impure blood produced by these constitutional diseases may affect the connective tissue outlets. Given then an obstruction of the connective tissue outlets of the posterior chamber by an ophthalmitis affecting the connective tissue, due to impure blood, and any one of the so-called exciting causes of glaucoma may so change the secretion of the posterior chamber as to clog the outflow spaces, and so induce a glaucomatous attack. Our knowledge of general, so called, blood diseases, added to Knies' experiments, and well-known studies of glaucomatous eyes, makes a rational chain of events leading up to an attack of glaucoma.

2. The following considerations place this causation of glaucoma in a clearer light. Thus outbursts of glaucoma are most frequent during and following middle life. This fact admits of two interpretations. *First*, Priestly Smith argues, that the lens becomes hardened and enlarged by age, so that it more entirely fills the circumlental space. Farther, he thinks that glaucoma occurs mostly in the hyperopic, in eyes in which this space is already abnormally small. In such an eye a relatively slight disturbance of the circulation of the posterior chamber suffices to push the lens forward, to crowd the iris against the anterior angle of the eye and to prevent the outflow through Fontana's spaces. The so-called causes of glaucoma, according to this view, produce an engorgement of the blood vessels of the posterior chamber, and so push the lens forward, when owing to a deformity of the parts the anterior angle is closed, and a glaucomatous attack induced. *Second*, a broader view of the relations of glaucoma to age, adds to the changes in the lens, changes found in other portions of the body. One has but to make a very superficial study of individuals during and after middle life to find that all the conditions are present for the promotion of connective tissue degenerations, as well as vascular, secretive and nervous. Individuals continue to eat as when they needed food for growth and development, as well as for the actual work of each day and the maintenance of existence. This excess of food fails to be perfectly digested, and so never becomes a part of the living tissues, but is driven about the blood, lymph and secretory spaces, in its course disturbing the wholesome activity of each part. Secretion and excretion are more or less disturbed, so that effete materials are retained within the body, thus increasing the disturbing and dangerous elements of the circulating fluids. When the connective tissues have been subjected for years to this constant irritation, and auto-infection it is not surprising that there results a group of interstitial or glandular diseases. Certainly we ought not to be surprised, if a few among the whole mass suffered from a degeneration of the outflow connective tissue spaces of the posterior chamber, and so became liable to an outburst of glaucoma, when some especial cause rendered the secretion of the posterior chamber, so noxious as to occlude the contracted spaces.

Another factor of age, intensifying that already mentioned, is the diminished muscular activity of advancing years, by which the utilizing of excess of food is diminished, secretions and excretions made less active and so the accumulation of impure blood accelerated. Many other elements might be added all proving that impure blood is the vice of middle life, a vice dependent upon numerous physical, mental and moral factors, but all laying the foundation for some organic disease. Why in one, interstitial nephritis occurs, in another interstitial hepatitis, in another spinal sclerosis, and in another that disease of the connective tissue outflow spaces of the posterior chamber, is unknown Possibly the same individual might have the entire list if he could live long enough

Since diminished spaces in the connective tissues of the outflow channels is the factor which makes operative the so called causes of glaucoma, then a child may inherit from gouty or rheumatic parents such diminished spaces, and so be attacked with glaucoma

3 But aside from age, certain diseases are certainly closely allied to the causation of glaucoma In several recent papers Dr Richey has admirably discussed this point, showing the relation between the manifestations of gout, gouty rheumatism, etc , and glaucoma He regards simple glaucoma as the basis of all forms of primary glaucoma In each an interstitial ophthalmitis exists, originating as other interstitial diseases The varied forms of the disease he ascribes to the part of the eye attacked, the rapidity of its progress and the order in which different portions are disabled by the disease

In simple glaucoma the connective tissue in and about the optic disc is first affected by the noxious elements contraction of the tissues follows, leaving more or less extensive excavation of the optic disc and destroying in varying degrees the optic nerve fibers The central retinal vessels drop to the sides of the excavation, and by their peculiar appearance when seen by the ophthalmoscope easily prove the presence of the excavation If in such a case the interior connective tissue spaces become constricted, ı slight disturbance of the secretion of the posterior hamber may suffice to clog the outflow, and produce ı case of acute, sub-acute or chronic inflammatory laucoma, according as the obstruction be sudden nd complete or slow and incomplete The fluid pent p in the posterior chamber pushes forward the lens gainst the posterior wall of the cornea, the ciliary ody against the anterior angle, dilates the iris, renders it immovable and crowds it into the anterior igle increases the tension of the eye ball, renders e cornea steamy and insensitive dilates the anter- ı ciliary vessels, and induces a group of subjective mptoms, varying with the stage and degree of the ockage In hemorrhagic glaucoma the events eady noted are complicated by the rupture of weaked blood vessels within the posterior chamber

In many cases of acute glaucoma there is no cupıg of the optic disc because its connective tissues e not been attacked the ophthalmitis being lim- l to the anterior outflow spaces It would seem t the relationship of chronic humeral diseases to ucoma is very important

)r Jonathan Hutchinson (*Oph Rep*, Vol ii) s that there are many different forms of inflamma- ı of the eye, or parts of it which are in connection ı gout and gouty rheumatism He divides them ı two groups 1 Those which go with acquired ıoral or renal gout 2 Those which depend n inheritance or structures damaged or special- by gout in progenitors The differences een these two classes is very marked In one attacks are of a transitory nature, acute and ıded with much pain In the second group there reat tendency to chronicity and persistence gh there is a tendency to temporary recovery recurrence Their onset is often insidious, but lisease is usually in the end destructive These two groups admirably describe the characteristics of acute and chronic glaucoma

If we seek the mechanism by which these diseases induce glaucoma we have but to remember that in them the connective tissue outlets of the eye are constantly bathed in the secretion formed from impure blood, just as we found in the case of the over fed, badly fed over-worked, under-exercised person of middle life or beyond In both the connective tissues of the outflow spaces undergo organic changes that admit of their readily clogging as the secreting fluid of the posterior chamber is altered by any one of the many existing causes of the glaucomatous outburst Dr David Webster (Trans Amer Oph Society, 1885) reports a case in which a glaucomatous outburst followed a very hearty meal, and another from the eating of a peach Dr S D Risley reports a case in which certain acid fruits would surely excite such an attack, the special fruits were the peach and grape

The one condition present in all cases of primary glaucoma is a contraction of the outflow channels, the one cause of this contraction is a hyperplasia due to the long continued irritation of the secretions from impure blood, the disorders inducing such blood are many, to some of which we have called attention, as the pollution incident to over eating in middle life, gout, gouty rheumatism, syphilis, etc

The one factor which is essential to the precipitation of an outburst of glaucoma is such a change in the secretion of the posterior chamber that it will clog the meshes of the outflow spaces This changed secretion may be due to many causes, as imprudence in diet, to mental worry, violent emotion or shock, to overstrain of the eye, as in uncorrected astigmatism or presbyopia, to circulatory disturbances, as cardiac weakness, chronic cough, vomiting, stooping or straining, to mydriatics, etc No one of these events has been known to induce, in a sound eye, an outburst of glaucoma, otherwise they would be of common occurrence, because these events are incident to the course of nearly every person's daily experience

CONCLUSIONS

1 Glaucoma is a disease rather than a deformity, like hernia or astigmatism

2 The disease glaucoma has two distinct factors one inducing changes in the *connective tissues of the* body, including the outflow *spaces of the posterior* chamber of the eye, the *other so altering the secretion* of the posterior chamber that *it clogs the crippled* outflow connective *tissue spaces*

3 The first *factor results from the long continued* action of impure blood upon the *connective tissue* elements of the outflow *spaces, the second from a* variety of conditions *acting through the nervous*, vascular, digestive *and muscular systems or through* local strain *of the eye, as in presbyopia uncorrected* astigmatism, *or intraocular tumors, dislocated lens or* from the *use of mydriatics*

4 Impure *blood may result from* [illegible] diseases, as *gout, rheumatic gout, s p* [illegible] chronic *overloading of the body with food* [illegible] of its *assimilative power*

5 In *simple glaucoma the connective* [illegible] optic papilla [illegible] of the *optic disc* [illegible] *remains patent* [illegible] *diminishing* [illegible] the *anterior* [illegible]

tension and other glaucomatous symptoms appear

6 In acute inflammatory glaucoma the anterior outflow spaces are suddenly closed, inducing all the typical symptoms of a glaucomatous outburst

7 In sub-acute glaucoma the obstruction to the anterior outflow is less sudden and complete, and hence the symptoms are less severe and startling

8 In chronic inflammatory glaucoma the obstruction is more complete and permanent, and so the effects are more hopelessly destructive—glaucoma absolute marking the final stage when vision is totally lost

9 In hemorrhagic glaucoma the outburst is complicated by rupture of weakened intraocular blood vessels, so that hope of relief is slight

10 In secondary glaucoma the same obstruction to the outflow channels occur This may be due to an intraocular tumor, a dislocated lens, a lens swollen after decission, or to occlusion of the pupil, etc

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SOME QUESTIONS RELATING TO GLAUCOMA

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY ALEX W STIRLING, M D , C M (Edin), D P H (Lond)
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I propose to bring forward for discussion certain parts of the subject of glaucoma, which though far from novel, yet appear to merit, from their importance and the still divergent views concerning them, a constantly recurring investigation These questions are

1 Is glaucoma always preceded by papillitis?

2 Are certain doubtful cases of chronic glaucoma with an apparently normal condition of the anterior segment of the eye, unaccompanied by any sign of spinal and cerebral disease, but showing what is known as the true glaucoma cup, are these really glaucoma, or are they optic atrophy?

3 Should all cases of primary glaucoma be operated upon?

4 What is the cause of the cataract which occasionally appears in eyes which have just undergone operation for glaucoma?

Question 1 —Those who hold that papillitis is a constant accompaniment of the early symptoms of glaucoma should be divided into two classes, viz , those who assert that it actually precedes the glaucoma, and those who refer to it merely as invariably present in the initial stages of the disease

An abnormal condition of the blood vessels on the disc, with edema, is described by many well-known authors, and is no doubt familiar to most as a symptom of confirmed glaucoma, and may be dismissed as a possibly perfectly natural result of the glaucoma pressure

But it is otherwise with the assertion that papillitis is a constant precedent of glaucoma Klein supported Jaeger in this contention, Mauthner[1] thought the optic nerve was so softened by a morbid process secondary to choroiditis as to cup later under normal tension Brailey and Edmunds[2] had reason to believe that in primary glaucoma "neuritis' precedes the increased tension, and that an inflammation is also present in the ciliary body and iris, Gruening[3] recognized a congested disc as visible along with the first premonitory symptoms in certain cases, Knies[4] has observed "Among the earliest and most characteristic appearances I found marked hyperemia and edema of the optic nerve This appears to be the regular beginning which passes in weeks into cupping", Bitzos[5] asserted that "one can accept as an absolutely certain fact" that glaucoma begins "by a papillitis constituting a lesion which is primary and at the same time fundamental," and that during this stage, before the advent of *plus* tension or of any out ward sign, the cases being frequently discovered by accident, there is diminution of visual acuity and in the dimensions of the field

If we admit that glaucoma is always necessarily preceded by optic neuritis (which has certainly not been universally observed), it practically follows either that the condition of the optic nerve blocks a path of exit for fluids from the eye in such a manner as to cause forward displacement of lens and iris, with secondary obliteration of the normal filtration area in the corneo iritic angle, or that glaucoma is an inflammatory disease with iritis secondary to, or accompanying, the papillitis Now, experiments have shown that only a very small proportion of the ocular fluid leaves the eye in the region of the optic nerve, and we also know that in ordinary undoubted optic neuritis glaucoma may be said never to follow either in the inflammatory or atrophic stage, and even if we were, for the sake of argument, to admit that, normally, a large amount of fluid has its exit in this region, it would yet be hard to see why its blockade should cause that adhesion between cornea and iris so nearly universal in glaucoma We should rather expect merely a more rapid drainage at the angle

Against the theory that glaucoma is an inflammatory disease and that the corneo iritic adhesion is due to an iritis, a theory upheld especially by Knies, one might quote the opposite opinion of Bowman, expressed thirty years ago, and of De Wecker and many others since then, as well as that of the elder Critchett, Priestley Smith and Fuchs, that it much more nearly resembles a strangulated hernia The following facts might also be arrayed against the inflammatory theory Glaucoma with glaucomatous cupping, found in cases of mechanical obstruction to outflow through the corneo-iritic angle from affections limited to the anterior part of the eye, as from dislocated lens, in which case the tension may rapidly rise and fall according to the position of the lens, or, from hereditary ophthalmia, the result of malformation in or near the angle of the anterior chamber, the suddenness of the early attacks and their disappearance the fact that an operation, and that on the anterior part of the eye, can quickly and permanently remove the symptoms, as well as the fact that a drop of some mydriatic may cause an acute attack in an eye previously absolutely free from inflammation

Question 2 —The cases referred to are those designated "amaurosis with optic nerve cupping," by von Graefe, "glaucomatous optic nerve disease," by Edward Jaeger and ' excavation atrophy," by Stellwag, and which have been by some ophthalmologists, separated from other forms of glaucoma, but by others of equally high repute held to be merely one extremity of a continuous chain of connecting cases which terminate in the other direction in glaucoma fulminans

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[1] Mauthner Archiv Ophth XXVII 1878 p 178
Brailey and Edmunds London Ophth Hosp Reports x 1880 p 80

[3] Gruening Trans Am Ophth Soc 1889
[4] Knies Centralblatt f All Path , April, 1890
[5] Bitzos Annal d Ocul , vol 112 , 1894 p 92

I desire to take the position that these cases should be looked upon as glaucoma, and I presume that there would be no difference of opinion concerning such of them as might show even temporary increase of tension, or any symptoms in the iris which might point to peripheral corneo-iritic apposition It will also be agreed that there is no known reason why glaucoma and primary optic atrophy should not coexist in the same eye But leaving out of the question all such cases, the following appear to be reasons why "simple" glaucoma may be looked upon as real glaucoma and not as optic nerve atrophy

It has been asserted by Schweigger that unless increase of tension is distinct this symptom is of no value for diagnosis, as one can easily discover *plus* tension if one have faith enough But it is well known that the normal ocular tension varies with the individual We may, therefore, consider it as certain that a tension which is normal for some eyes is *plus* for others, that it is just as easy to omit to find a real *plus* tension as to imagine one which does not exist, and conclude that in certain cases, which appear to palpation normal, there is in reality a heightened tension This argument is supported by the fact that it is not a very infrequent thing to find cases recorded by ophthalmologists of the first rank, in which at the the same moment and in the same eye there coexist the apparently incongruous conditions of glaucomatous halos or rainbows and normal tension, the former having been proved to result from a very slight edema of the anterior layers of the cornea due to a rise of intraocular pressure

The statement was made by Zentmayer and Posey, in connection with their examination of 167 cases of simple glaucoma, noted in the clinics of Norris and Oliver, in Philadelphia, that shallowing of the anterior chamber was found in glaucomatous eyes where there was not yet excavation, while the converse was not true, for every eye which had an excavation had also a shallow anterior chamber By a shallow anterior chamber they evidently meant pathologically shallow, and their statement appears to indicate that *plus* tension, relative to the eye involved, as witnessed by the shallow anterior chamber, was or had been resent in all these cases in which the disc was cupped

One should also bear in mind that it is easy to fall nto error concerning the condition of the anterior chamber It is generally inferred that whenever it appears to be of normal depth there can be no peripheral apposition between cornea and iris But the periphery of the iris and of the posterior surface of he cornea are quite hidden from view by the anterior margin of the sclerotic and a deep anterior chamber has been proved to be quite compatible with corneo-ritic adhesion It has also been shown (and such ections I have in my possession) that the iris someimes makes an abrupt backward bend at the point t which it separates from such a corneal adhesion, which hides more effectually the true condition of ffairs On the other hand it would be hard to prove normal state of the filtration angle, because such oubtful eyes as those under discussion are not xcised, and even in the rare cases in which the angle s found open, in primary glaucoma, signs are freuently present that this patency has resulted from he excision of the globe

It has been abundantly shown that high tension occurs at one time or another in the vast majority of cases, that it may be present only very temporarily and at long intervals, and also that such cases, or others in which it happened that apparent *plus* tension had never been found, have not infrequently ended in acute glaucoma There is also the possibility that, like other bodily functions, the circulation through the eye may vary very considerably in the twenty-four hours, and that tension may be high when the patient is beyond observation, in the evening when he is tired, or even that the recumbent position may affect it in one way or another

We know that there is, in all probability, an automatic action, within the eye, whereby a rise in intraocular pressure has the tendency to again bring the tension down to normal, through pressure on the uveal vessels preventing farther secretion from them It would appear as if in the quietest forms of simple glaucoma the blood pressure was so low that a comparatively slight rise of intraocular tension would attain this result, little fresh fluid being poured into the eye so long as the pressure outside the vessels remained of sufficient force, and the hypothesis of an intermittent rise and fall in pressure appears to me reasonable Nettleship has already stated that the condition, as regards tension and organic changes in chronic cases, may perhaps be sometimes due to feeble circulation or loss of arterial elasticity

The acuity of the onset of symptoms would therefore appear to bear a direct relationship to the vascular tension in the uvea, or else the cause of their appearance to be of a rapidly fluctuating character

It might not be unreasonable to suppose that when the corneo-iritic filtration area is blocked and the tension in the vitreous is higher than that in the uveal vessels the capillaries in the ciliary region, which are wont to carry fluid to the vitreous, may then assist in removing fluid from it

A further argument in favor of the glaucomatous nature of these cases is the growing feeling that iridectomy is beneficial and should be employed for their relief

I have purposely avoided reference to certain supposed points of difference between simple glaucoma and some forms of optic atrophy, the form of the visual fields, variations in peripheral color vision, and in the "light difference and "light minimum," in color of the disc, in size of retinal veins, in pulsation of the retinal artery, in the pupil, etc , for I have looked at the subject from another point of view

Question 3 —The question will naturally be looked at from two standpoints—that of practical experience and that of pathology Experience at the present day appears to favor operation, but much depends on the operation chosen and upon the method of its performance

In certain cases operation is by some considered to be contraindicated, such as glaucoma due to mydriatics, which is frequently permanently cured by myotics, chronic glaucoma in patients whose health is poor from age or disease, but this is doubtful policy, and such cases of simple glaucoma as appear to benefit from myotics, and can be kept carefully in view

From the pathologic standpoint the wisdom of the earliest possible operation is apparent to those who look upon glaucoma as an interference with the functions of ocular excretion, and the objects of treatment, whether by drugs or operation, to be the opening up of closed exits

When forward displacement of lens and iris are found denoting that the obstruction lies at the lento-zonular level, a preliminary posterior sclerotomy to permit of their retraction, as advised by Priestley Smith, suggests itself as a suitable procedure, to be immediately followed by iridectomy, sclerotomy, or one of their modifications. The object of these operations is to produce a permanent path of exit for the intraocular fluids, either by opening up the normal filtration angle, and so removing the iris as to prevent the possibility of the recurrence of the closure, or, where this is impracticable, to provide a sufficient substitute.

We know that in the earlier periods of glaucoma the iris is in contact with, but not adherent to, the corneal periphery, and cure may be effected, as has been pointed out by Treacher Collins, by the mere escape of aqueous or by the dragging on the iris during its removal, but iridectomy should have in view much more than this. As frequently or generally performed, the iris is seized by forceps and then cut off, with the result that sufficient remains to again block up the exit. The better way is to tear the iris from its junction with the ciliary body, where it is flimsiest, from one end of the wound up to the other, and failure to do this has been the most prolific cause of non-success. Indeed, in forming an opinion as to the benefits of iridectomy one should be careful to distinguish such operations from those in which the iris is merely snipped away.

When iris and cornea are so adherent that they can not be separated, *i. e.*, in chronic, long-continued cases, our hope lies in the formation of subconjunctival fistulæ. When these are permanent and successful they are lined by atrophic iris which keeps the wound from healing. Where this adhesion is known to exist an opening into the posterior chamber through the iritic root as advocated by Treacher Collins, Nicati and Knies, has the best prospect of success, and the V-shaped incision of Nicati, which also freely divides the base of the iris, but upon which I can not speak from personal experience, appears to be attended by excellent results. In those cases in which the actual position of the angle may at first be doubtful, and in which an iridectomy proves useless, Nicati's incision downward might well replace the secondary sclerotomy so frequently employed.

Vincentiis of Naples claims for his operation of tearing or cutting away the iris from the cornea with a sickle-shaped needle that, when these tissues are adherent it acts in a manner superior to either iridectomy or sclerotomy.

In concluding this question I would advocate the earliest possible operation in practically all cases of primary glaucoma (at the same time that attention is given to the general health) independent of contraction of the field, and so long as there is any vision to be saved or pain to be relieved, and that the better eye should first be treated, because in it there is more to lose by delay and because in the event of only moderate success or worse, with the first eye, the patient may be disinclined to return on account of the second.

Question 4.—It has been stated by ophthalmic surgeons of the highest order among whom is one who has done some of the best work in recent ocular pathology that the cataracts rapidly following upon iridectomy are always due to a wound of the capsule of the lens received in the course of operation. That the possibility of this is one of the serious objections to operation for glaucoma, that it may readily happen in the hands of the most skillful, especially when the cornea is small and the anterior chamber shallow, and that the wound may arise not only from the edge of the knife, but also from the back of a "Graefe," from the iridectomy forceps, or during reposition of the edges of the coloboma, will, I think, be readily admitted.

But it is more pleasant to the feelings of the surgeon, who, after the greatest care to avoid the lens, and in the belief that he had done so, yet shortly discovers a rapidly growing cataract, to know that other explanations of its occurrence may be forthcoming, and these, I think, are not difficult to find.

To begin with, any one who will carefully examine the lenses in a series of apparently healthy senile eyes under a mydriatic will observe that in no small proportion of them he can discover peripheral striæ, not the normal striæ of the section of the lens visible by transmitted light in the eyes of many old people, but due to true cataractous change. In glaucomatous eyes these have been noticed in a still higher proportion.

In such eyes, or even in eyes without such lenticular change, it can scarcely be considered unreasonable to hold that the sudden alterations of conditions resulting from the emptying of the anterior chamber may have just as much effect in producing or in ripening cataract as has the well-known method of friction on it, directly or through the cornea. For those changes are very considerable. The zonular attachments are strained by the forward movement of the lens, and the lens may even come in contact with the cornea, while one must expect its nourishment to be seriously interfered with by the rapid passage from the eye of the fluid upon which its welfare depends, a fluid which also, as Nicati, Greef and others have shown, undergoes a change in composition upon the first opening of the anterior chamber.

A CLINICAL NOTE ON THE USE OF PYOKTANIN

Read before the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY H. B. YOUNG, M.D.

BURLINGTON, IOWA.

My experience with pyoktanin probably differs little from that of your own in those suppurative troubles of the eye and ear for which it has been considerably lauded, *i. e.*, occasionally very satisfactory, but more often disappointing, if not indeed aggravating. In fact after many disappointments I practically discarded it from my list of remedies as I have no doubt many have done.

About two years ago, however, after an unsuccessful attempt to treat a case that I had diagnosed as phlyctenular conjunctivitis, by the classical method, viz. Pagenstecher's ointment, calomel dust and mydriatics locally, plus alterative and tonic medication internally, pyoktanin in 1-1000 aqueous solution locally was accidentally suggested. To my surprise the case improved rapidly under it and was soon well. A month later the patient, an anemic girl of 15 years, returned with a fresh efflorescence. Again was the Pagenstecher's ointment and calomel dust distinctly irritating and the pyoktanin promptly effective. Following this at irregular intervals the efflorescence recurred and was promptly subdued by the pyoktanin. In the meantime a younger sister of this patient showed the same conditions, had the same treatment with the same result

From this time all cases of conjunctivitis lymphatica were treated in this way and it was noticed that those were soonest benefited in which the efflorescence was marked by lachrymation and congestion of the palpebral conjunctiva, while the elevations at the limbus showed irregular outlines and little disposition to surface softening

Why there should be this difference or why the pyoktanin should, in any case of this character, be as effective as the time honored mercurials I do not know

Pharmaceutically the mercurials were as perfect as possible The Pagenstecher's ointment I prepared by a method which could hardly be improved, as the product stands the test of inspection through a powerful lens And the calomel was of the best quality, thoroughly dried and lightly dusted

The pyoktanin was Merck's, dissolved in water which had been boiled thoroughly A fresh solution was prepared when any change was noted in the color

DISCUSSION

Dr G C SAVAGE, Nashville—Just before leaving home I prescribed pyoktanin for three cases of phlyctenular conjunctivitis and as Dr Price has just entered the room I should like to know from him what the result has been

Dr PRICE—The only one of the patients that has returned is doing well It was a bad case and had shown no improvement under a week's use of the yellow oxid

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FRANKLINIZATION AS A THERAPEUTIC MEASURE IN NEURASTHENIA

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga , May 5-8, 1896

BY MARGARET A CLEAVES, M D

Director of the New York Electro Therapeutic Clinic Laboratory and Dispensary late Instructor in Electro Therapeutics, New York Post Graduate Medical School Fellow of the American Electro Therapeutic Association Member Société Française D Electrothérapie Fellow of the New York Academy of Medicine Fellow of the Medical Society of the County of New York Fellow the American Medical Association, Member the New York Electrical Society

NEW YORK

Looking at it from a purely scientific point of view the recognition under the head of neurasthenia of the many and varied expressions of nerve weakness is most unfortunate, and must have a tendency to hinder that investigation into the true nature of the underlying conditions which is absolutely essential to the advancement of the science of medicine On the other hand this recognition has led to the establishment of excellent therapeutic methods, which, however, are so familiar as not to need enumeration here

Among them Franklinization takes an important place, and although it is the oldest form of electric treatment, its value is not yet fully appreciated by the profession

It is not within the scope of this paper to discuss the nature of neurasthenia, interesting as the subject is, suffice it to say that neurasthenia in an acquired form, may be regarded as primary or secondary, primary when due to the immediate effects of nervous overstrain or to a primary toxic disorder of nutritional processes, and secondary when consequent upon other diseases having a general pathologic diathesis with its peculiar and exhausting toxic influence

The nutrition of nerve cells is primarily at fault, and they break down even under slight overstrain whether of work or mental anxiety They lack in stability, and are incapable of ridding themselves of the results of physiologic activity The toxicity thus induced plays an important rôle in the production of the varied manifestations of physical and mental discomfort to which the neurasthenic is subject

The problem before us in the treatment of neurasthenia is to prevent undue waste of nervous substance from excessive fatigue as well as to eliminate the toxic influence of self-produced waste products To this end whatever can be done to establish and maintain the highest nutritive activity is absolutely imperative

Whether we regard the neurasthenic condition as due to exhaustion, starvation or poisoning of nerve centers its treatment by means of Franklinization is absolutely rational

There is nothing of the occult about it, nor can the action of general Franklinization either by means of the convective or disruptive discharge be, in any sense, attributed to suggestion, hypnosis or to some subtle influence upon the nervous system The same effects can not be reproduced by such methods

The grand function of all electric treatment is to promote nutritive processes, and in general Franklinization there is no exception to the rule On the contrary, by reason of its physical characteristics it is the most efficient of the varied manifestations of electric energy The ease with which it can be used, requiring no preparation nor tedious detail in its administration as do other currents, renders its application very acceptable to patients

The influence of high frequency and high potential currents upon nutrition has been established by observations in physiologic laboratories and in clinical work

In all neuroses there are abnormal chemic conditions of the tissues and aside from the influence of heredity, deficient constructive and deficient destructive metabolism are the two prominent factors therein The need therefore in our therapeutics of a means which will influence a more nearly normal metabolism is imperative The rationale of general Franklinization lies in its ability to set up processes resulting in the production of physiologic effects

The increased activity of an organ is indicated by the increased amount of blood circulation When an organ is completely inactive, as in the case of a paralyzed muscle or the peripheral end of a divided nerve, the amount of blood and the nutritive exchange of fluids diminish within these parts Thus thrown out of activity they become pale and relaxed, and ultimately undergo fatty degeneration If cells are imperfectly deprived of their detritus they do not appear to take up oxygen readily, consequently are not adequately nourished and undergo degenerative changes

The average neurasthenic patient is not in a condition to take the active exercise necessary to bring muscular tissues into activity so as to profoundly influence circulatory changes It is impossible to change the nutritional state of cells without a profound stimulating action The general circulation in these conditions is impaired, while vascular changes in the nervous system exist These are of the nature of a cerebral hyperemia and probably hyperemia of the spinal gray matter as well The vaso-motor neuro-mechanism is believed to be at fault The extremities are cold and the heart's action feeble If the blood stream does not circulate with normal activity new material is not supplied to the tissues, nor is effete material removed from them As a general rule the stimulation is more energetic, the more rapid the variations of the electric current applied to the nerve (Du Bois Reymond)

In the great variations of potential which the patient subjected to general Franklinization experiences, may be found a reason for its profound stimulating effect A constant and inconceivably rapid variation of potential characterizes every Franklinization, whether by means of the convective or disruptive discharge And this variation must result in profound stimulating action upon nerve cells, enabling them to alter their nutritional state

In employing currents of great frequency the organism is traversed without manifesting any reaction If the frequency of these currents were lowered their energy would be destroyed in so far as the production of characteristic physiologic effects are concerned

It is believed by D'Arsonval that these currents exercise upon nerve centers and upon muscles the action studied by Brown-Séquard under the name of *inhibition* The tissues traversed by them are those less susceptible to the ordinary excitements The physiologic effects demonstrated by D'Arsonval and others would indicate that currents of high frequency have a profound influence upon the organism affecting nerve centers, however deeply placed, even though the application electrically alters or disturbs the superficies of the body alone

The vaso-motor nervous system is also strongly influenced After an experiment upon the human organism with these currents has been long enough continued there can be seen upon the cutaneous surface dilated capillary vessels and the skin is found to be covered with perspiration There is also an increased intensity of the respiratory combustion The excretion of urea is increased and uric acid, if present, diminished, or on the other hand a normal or more nearly normal relation is established between them The ultimate effects are upon all the nutritive processes Oxidation is furthered and metabolic changes hastened

By means of the disruptive discharge or spark a profound perturbatory effect is produced Whenever a spark impinges there is produced an effect upon the vaso-motor nerve followed at first by a vaso-constriction as evidenced by the pearly white or goose-flesh appearance of the skin This in turn is followed by a vaso-motor dilatation evidenced by redness of the skin If for any reason there is a localization of the disruptive discharge there may be produced a distinct dermatitis as the result of the application Also as a result of the disruptive discharge more or less profound muscular contraction is produced according to the character of the spark, larger and more extensive with the long spark gap, shorter, sharper and quicker with the lesser spark gap

The rôle of muscular activity is one that is well established, and the effect is to produce an increased activity of the blood stream within the muscles of an intact body The blood vessels dilate so that the amount of blood flowing through them is increased At the same time the motor fibers are excited, the vaso-motor fibers are also Muscular contraction is attended by the production of heat This is greater or less according to whether these contractions are many but small, or fewer and larger In the latter case more heat is generated This shows that larger contractions are accompanied by a relatively greater metabolism than small contractions, which is in accord with clinical experience

Then again, we have to deal with the two-fold influence of the nervous system upon metabolism On the one hand it acts indirectly through its effects upon the blood vessels, by causing them to contract or dilate through the agency of the vaso-motor nerves, whereby the amount of blood supplied, as well as the blood pressure, are influenced But metabolism is still further influenced, independently of blood vessels, through the trophic nerves

The afferent supply of blood current carries to the tissues the proteids, fats, carbohydrates and salts from which the tissues are formed, and any interruption of the arterial supply diminishes the supply of nutriment On the other hand, the efferent stream carries away decomposition products from the various tissues, more especially urea, CO_2, H_2O and salts, and transfers them as quickly as possible to the organs through which they are excreted With the supply of nutrient material thus provided and the removal of the products of organic life, the vagaries, morbid fears, melancholias even, the aching and weariness as well as the hyperemias, are relieved

The convective discharge is the treatment *par excellence* for neurasthenic patients By it is meant what is commonly known as the static spray or breeze It is in reality a succession of infinitesimal sparks as obtained from the powerful Holtz machines, which passes into a continuous stream between the two discharging rods or the insulated patient and the administering electrode This discharge is non-oscillatory in type and, so far as can be seen from its physical nature, produces but superficial effects The effect, therefore, upon the interior of the body is by a secondary influence, produced primarily upon the superficies, by which it becomes electrically altered or disturbed If the charge is mild, this convective discharge will only be felt as a cool wind, but when these machines are working to their full capacity, and particularly if the patient holds the chain in the hands, establishing connection with one prime conductor of the machine, there is a marked tingling, stinging and pricking as of many needles By localizing this discharge to any point desired, the seat of an obstinate pain, there can be produced an extensive redness and blistering (dilated capillary vessels) of the skin, and in sensitive conditions of the spine where there is pain on pressure, I am in the habit of continuing the localization long enough to produce this effect

When a piece of woolen cloth or a patient with woolen clothing is placed upon the platform in contact with the distributing chain and subjected to a localized convective discharge, the clothing or the fabric is microscopically[1] burned as though by many minute coals of fire

Ordinarily, the passage of one coulomb of electricity through a circuit in one second of time means a rate of flow or current strength of one ampere, on the average during that time If[2] this coulomb passes through the circuit in one-thousandth of a second, the mean current strength would be 1,000 amperes, and if in the millionth part of one second the mean current strength would be 1,000,000 amperes For this reason the total quantity of electricity, in a pair of leyden jars for instance, or in the case of a working conducting circuit where the patient represents the one leyden jar and the grounded area the other, even when charged at a pressure of thousands of volts, is very small, yet owing to the great frequency or rapidity with which this charge is passed through the circuit, the current strength during that time may be considerable The action upon the woolen fabric would indicate that such is the case The patient in this conducting circuit is doubtless traversed by an alternating current of greater strength than would be borne without pain under ordinary conditions

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[1] With my large 8 plate 30 inches in diameter Holtz machines, this burning is not only microscopic but macroscopic as well

[2] Houston and Kennelly Electricity in Electro therapeutics

In the convective discharge there is produced an effect upon the nervous system, affecting the vaso motor nerves causing first a vaso constriction, as evidenced by the sense of chill and shivering when first subjected to its action, followed by a vaso-dilatation, with an ultimate equalization of the blood stream Under the influence of the convective discharge the activity of the skin is increased with perspiration, most noticeable in palms of the hands, the temperature, if subnormal, is raised, if abnormal reduced, while the heart's action is regulated Corresponding circulatory changes are established, as shown by the number of pulse-beats before and after the discharge, the change in volume and the sphygmographic trace Such physiologic effect can not be produced without causing a change in the patient's condition and inducing a feeling of well-being

The pains and weariness, the morbid fears and fixed ideas disappear under these more nearly normal conditions, but the disappearance at first is only temporary The changes set up are not sufficient to endure perhaps for more than a few minutes, a half hour, in rare instances, twenty-four or forty-eight hours More work must be done before nutritive changes are established to such a degree as to prevent a recurrence of former conditions The flagging energies are aroused by the stimulating influence of the application, which, however, if not persisted in, is as valueless as the whip and spur to the exhausted horse without rest and food

In the desultory and unscientific way in which Franklinization has been used are to be found the reasons for its failure Only with a large clinical experience is it possible to reach definite conclusions as to the manner of its application, the length and number of seances, and to formulate a law governing its administration Personal idiosyncrasies, as well as the duration of the disease and the manner of its manifestation, must be considered

Moral means must never be lost sight of, in addition to the general Franklinization, the rest or exercise, according to the character of the case, is of paramount utility

In the treatment of neurasthenic conditions by means of the Franklinic current, I find that I can secure without enforced rest and seclusion the return of health to a considerable class of neurasthenic patients, with greater independence of character and increased volition, than is possible by means of the rest cure and massage These last named measures have their value, but to a large number the seclusion, the dependence upon others for every thought almost certainly for every volitional act, is pernicious in the extreme Habits of invalidism are fostered, with fixed ideas as to the suffering and disability endured, which means a changed nutritional power on the part of nerve cells

In a paper upon the "Psychical Treatment of Neurasthenia," by Dr J J Putnam of Boston,[3] the influence of general Franklinization upon temperature and pulse in neurasthenic patients is considered He shows a similar influence with the patient placed upon the platform and no connection made, but the machine still in motion as in the ordinary application of the convective discharge The conclusion that he seems to draw therefrom is that the changes in temperature and pulse are due to some subtle influence upon the nervous system, rather than from the Franklinization He does not state whether in the latter instance the machine was in a state of charge or not, the inference must be that it was Such being the case, the patient still remained in the electro-static field even though the insulating platform was not connected with the source of energy

From the physical laws governing electricity at these potentials it is absolutely impossible to keep it within bounds There is a constant leakage from the metal finishings of the machine and a disturbance is created in the entire atmosphere of the room Henry has shown that a spark from an electric machine extends its influence to a distance of many feet Physiologic effects may be obtained by standing in the vicinity of powerful dynamos in operation and physicians from various sections of the country have told me of sending their sleepless neurasthenic patients to electric power houses that they might have the benefit of the electric disturbance thus created

But there is also another influence at work It is absolutely impossible to have an electro-static machine in operation without the production of ozone. Chemic tests demonstrate the existence of ozone in the atmosphere, and it is shown that it exists in greater quantities in the country than in the city, at the sea shore and in the mountains in still greater abundance, notably in the best climatic resorts of high altitude It is, no doubt, one great source of the healthful influence of such places Near the backbone of the mountain range of the Blue Ridge in North Carolina, it is so abundant as to be constantly apparent by its peculiar odor Its increased chemic activity renders it more effective than oxygen It is not necessary here to speak of its intense oxidizing action, antiseptic properties and power of destroying offensive odors Recently its physiologic effect has been very carefully studied by M M D Labbe and P Oudin and published in the *Bulletin Officiel de la Société Francaise d'Electrothérapie* for November, 1894

These observations showed, even after ten minutes inhalation of ozone, an increase in the amount of hemoglobin of from 1½ to 2 per cent Subsequent examinations, made several days later, demonstrated that the increase persisted The examinations were made by means of the spectroscope There was also a proportionate increase in the number of red blood corpuscles and a progressive diminution in the number of white, and the conclusion arrived at both from physiologic experiments and clinic results was that ozone most powerfully modified the blood and nutrition, resulting in the establishment of health. One of the sources for its production are the large Holtz or influence machines used in medical work.

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[3] Boston Med and Surg Journal May 23 1895

When the influence machines in my office are in motion, the electro-static field extends not only over the entire floor occupied by the machine, but to the basement below, sparks being drawn from the gas pipes, etc. The electro-static field is enormous in its extent, and while we secure our best results from the use of an insulating platform, it is not necessary to obtain physiologic effect.

By the action of the electric spark upon the air a synthesis is produced whereby we have ozone formed. At least a part of the benefit derived from general Franklinization by means of the convective discharge is due without doubt to the production of ozone, and in Dr. Putnam's cases this influence could not have been eliminated, as the ozone pervades not only the atmosphere of the room where the machine is placed but adjoining rooms as well.

During three years' work at the Electro-Therapeutic Clinic at the Post-Graduate Medical School the nurses who were sent to the clinic for two or three hours three times a week to assist in the work, spoke to me of a general physical improvement of which they were conscious, with relief from menstrual pain and improved sleep. Their appearance indicated a nutritional gain. Different nurses made these statements from time to time during their term of service, and after my attention was called to it I was in the habit of watching them closely, taking their weight, etc., and inquiring as to physiologic functions, in order to establish the correctness of their reports.

In dealing with this form of electric energy we must remember that on account of its high frequency and high potential it pervades all space around the conductor. The metallic prime conductors, the conducting rod connecting the same to the platform, merely provide a surface from which the charge can enter and influence the air around it. The charge really resides in the air, or more strictly in the air and ether surrounding the body. The energy is distributed through all the ether in the room, although not equally. The greatest current density exists upon the insulating platform and about the body of the patient, after that in the space near the machine, and consequently the greatest difference of potential would be maintained in the former instance, with a greater and more effective convective discharge.

I can sit upon an insulating platform entirely disconnected from the machine and still demonstrate that I am in the electro-static field by the movement of a silk thread toward and to one prime conductor. With the platform disconnected, and the machine grounded as in ordinary use, there is not only a convective discharge that is apparent by the usual physical phenomena, but a disruptive discharge can be produced by approaching any part of the body to the electrode connected with the ground or the prime conductor. This discharge is of the non-oscillatory type. Therefore the observations to which I referred are not convincing.

THE TECHNIQUE OF ADMINISTRATION

In connecting a machine for use it should always be grounded. The insulating platform is connected to one prime conductor by means of the conducting rod, while the other is connected by means of a chain to some suitable ground in the room or near by, as for instance a gas or water pipe.

The disruptive discharge when the machine is not grounded, is of the non-oscillatory type, as is indicated by its thin, blue straggly appearance. It has a biting and irritating character, which renders it extremely objectionable to the average patient, especially the neurasthenic.

Grounding the machine enlarges the area over which a charge may be distributed before it is discharged by its spark, and practically amounts to the use of large condensers, *i. e.*, Leyden jars. It increases the electrical capacity, there is not only a greater charge, but a greater discharge, whether convective or disruptive. The character of the discharge is changed in some instances from an non-oscillatory to an oscillatory one, while in others there is produced a more typical oscillatory discharge. The disruptive discharge thus obtained is vivid, clean and thick and not inclined to break up nor irritate as the spark obtained from the direct method. This is due to the change in the character of the discharge, from an non-oscillatory to an oscillatory one, and in this physical fact is found the reason for grounding our machines for medical work.

Until recently the question of insulation was regarded as an important one, as the physiologic action of the different insulations, *i. e.*, positive and negative, had not been accurately determined.

Some six years since Damian of Paris made a series of observations upon temperature and pulse and the urine to determine what, if any, difference there was in the different insulations. The published statement showed that with the positive insulation there was a regulation of the temperature and heart's action, an increase of urea and diminution in uric acid, while with the negative insulation these changes were less marked in so far as temperature and pulse were concerned, and that the volume of the urine was increased, but no change in its organic constituents.

Within the past five years I have made a great many observations upon the physiologic effect of positive and negative insulations in order to determine if possible the therapeutic indication. Those with the positive insulation upon temperature and pulse were made at the Electro-Therapeutic Clinic of the Post-Graduate Medical School and upon urine in my private practice, while those with the negative insulation were made in the New York Electro Therapeutic Clinic, Laboratory and Dispensary. In both instances the physiologic effect has been the same, viz., a regulation of temperature, raising a subnormal, lowering an abnormal, a regulation of the heart's action with corresponding circulatory changes, and an increase of urea and diminution of uric acid.

This is in accord with the physical laws governing the Franklinic current. It does not matter, therefore, which prime conductor, whether positive or negative, is connected with the insulating platform, nor which is grounded. As a matter of fact, the spark with the negative insulation is much less biting, sharp and stinging in character, therefore it is preferable for sensitive patients.

The patient is placed upon the platform and the machine set in motion. Patients are often timid at first and need reassuring. Everything that would jar, shock or disturb is to be avoided. It is therefore best to allow the patient to sit quietly upon the insulating platform, without placing the stand holding the electrode near the platform, or using an electrode in the hand connected with the grounded area. Profoundly neurasthenic patients are easily alarmed and their confidence destroyed at the outset by so doing. As a patient sits upon the platform, he is in a condition of charge and may be likened to a leyden jar. The grounded area of the other prime conductor may be likened to another leyden jar. The patient's potential is raised and any movement, no matter how slight, results in some discharge or equalization of the difference of potential as he comes in contact with the stress existing in the air about him. Therefore it is impossible to regard the condition as simply one of charge, for in reality a mild convective discharge is taking place all the time. The completeness of this discharge is greatly increased by approaching the stand, holding the electrode and connected to the ground, to the patient, or by swaying the pointed electrode back and forth over the entire general surface of the body. At first the automatic application is best, for with the electrode in hand, even if great care is observed, the difference of potential is often unintentionally overcome by reduction of distance, resulting in a disruptive discharge in the form of a spark which greatly disturbs the patient.

Nervous patients will sit quietly on the platform in a condition of "charge," or even with an electrode at rest at a fixed distance, when if it be moved gently to and fro by the operator they will become exceedingly nervous and apprehensive, shrinking in a blind terror from the application. Tact and patience will later enable the operator to use the electrode for a general application or any desired localization. As confidence is established the strength and consequently the effectiveness of this convective discharge may be increased by having the patient hold in the hands the distributing chain, thereby placing him in direct connection with one prime conductor of the machine, then by approaching the electrode fixedly placed in the stand, or in the hand toward the patient, he is placed under the influence of a strong convective discharge which is known as the *needle spray*. From this we proceed to a friction spark, produced by rubbing the patient lightly with the ball electrode. This must be swiftly done or else it will be intolerable. The sensation is as of thousands of hot needles, but if well done is followed by such distinct relief in the average case as to be uncomplainingly submitted to. The effect is a revulsive one and there is sent through the peripheral nerves an influence to the nerve centers most beneficial in its effect. It is a well known fact that by peripheral excitation the nutrition of ganglionic cells is altered. Applications by means of long percussive sparks should follow upon the "charge," "spray," "needle spray" and friction spark, and often in neurasthenic patients should not be used at all. When the need for strong far-reaching muscular contractions exists, the disruptive discharge should be resorted to.

As a rule neurasthenics do not tolerate the disruptive discharge. It has too powerful a perturbatory effect, producing as it does profound contraction of muscular tissue. After its use patients are exhausted, trembling, and later on sore and bruised, unable to sleep and so profoundly shaken up as to be unwilling to submit to another treatment. This is especially true of the neurasthenics of the exhausted type. But where the condition of nerve exhaustion is really one of infection from self-poisoning, or where the nutrition state has been improved by rest, forced feeding massage and seclusion even, without corresponding improvement in the mental manifestations, the disruptive discharge is indicated after toleration has been established. In Franklinization it is necessary to remember that exercise should always be kept within the limits of fatigue.

In all cases the treatment should be begun by means of the convective discharge. It is characteristic of living tissues to respond to stimulation, but that stimulation must not necessarily be applied in the form of profound shocks. Leave the severe measures until later in the treatment of these cases.

In sexual neurasthenia, with impotence or irritation, the localization should be to the lumbar and sacral plexuses and by means of the director electrode to the perineum carrying the electrode as far forward as the anatomic structures permit. When we bear in mind the number of nerves which center in the perineum, the beneficial reflex effects from so powerful a stimulation can readily be appreciated.

In the beginning of the treatment with the Franklinic current, in neurasthenia, the earlier seances should preferably not last more than ten minutes, as there is danger of inducing an over-stimulation. This should always be avoided. If it is found that a ten minutes' sitting is well borne, the next sitting may be slightly lengthened, and when a patient's toleration is fully established it may be extended to as much as thirty minutes. The crown electrode, fixedly attached to the electrode stand, should be placed over the hand during the first of the sitting, while the latter part of the application should be made by means of the point to the entire general surface of the body, localizing it to the spine, especially the nape. In those conditions where there is a tendency to a passive congestion of the brain, the application should be made by means of the point adjusted so as to localize the discharge to the spine, preferably the nape, in order to obtain an influence over the vaso-motor center. Sometimes in cases where such congestion exists the use of the crown electrode intensifies the discomfort and patients will complain of a full, bulging feeling in the head, which is most undesirable. When it is found that the convective discharge is well borne, which will be indicated by an improvement in the temperature, in rate and volume of pulse, in the moisture of the skin, naturally much less marked than with the disruptive discharge, also by a sense of well being and often times a sensation of quiet with a desire to sleep, then if the indication exists for a profounder revulsive effect, the friction sparks may be used to the entire general surface of the body, the localization being as before to the spine and especially to the nape for the influence upon the vaso-motor center.

As to the frequency of the application. In most neurasthenic patients and particularly the exhausted type, daily seances at first are preferable. The gain is surer and the time of treatment shortened by daily applications for the first week, two weeks, or possibly a month or six weeks. Rarely should the maximum time be exceeded however. The period of time for daily seances is to be determined by the persistence of the relief established from a single treatment, as soon as it is found that the relief established continues over twenty-four hours, then the treatment should be given every other day and subsequently as the improvement maintains itself for a longer time every third day to once a week, and finally to a discontinuance of the application. It is not possible to lay down a fixed rule for the length of time that a patient should remain under treatment, because the recuperating power of some of these cases is very much greater than others, while their environments differ to such an extent as to modify the effect The indications, however for the discontinuance of the treatment, the nutritional gain and relief from symptoms are very clear

The work can only be done slowly and as soon as the organism ceases to respond to the stimulation which has been used, and which has for the moment set up more nearly normal chemic action, then it should be repeated Nothing is gained by waiting after that time comes, and much is lost In the exhausted type of neurasthenics daily seances are necessary Patients judge very clearly as to when less frequent applications are desirable During the period of great exhaustion, physical and mental, the craving for the electro-static bath is very great As nutritive changes are set up, followed by increased strength and energy, these patients are able to go on with comfort for a period of two or possibly three days without treatment

Nerve cells undergo certain changes in the course of their functional activity which can only be interpreted as those of fatigue and we must remember that in neurasthenia we have to deal with nerve cells unable to get rid of fatigue or toxic products They may be said to have undergone the "molecular or chemic variation," and as a result have an "exhausted or changed nutritional power" The whip and spur must be applied as soon as they lag But we must understand clearly that while there is a stimulation, it is not an evanescent effect, but one that results in chemic changes tending to the establishment of nutrition and healthful function

It must be constantly born in mind that it is work which is being done in the tissues of the body, and that the indications for the repetition of that work lies in the permanency of its results

When we connect a sphere[4] to a terminal of an electro-static machine having an electro-motive force of say 200,000 volts, it will receive a comparatively large quantity of electricity, which will be a certain fraction of a coulomb Suppose the charge communicated to the sphere be 1-1,000,000 of a coulomb, delivered at a pressure of 100,000 volts In that case the work delivered to the sphere would be equal to 0 1 of a joule or 0 0738 foot pound

This energy is received by the air and ether surrounding the sphere and held there during the maintenance of the charge It is distributed throughout the room, although not equally A certain fraction of a joule is charged in each cubic inch of space, the greater amount being in the immediate neighborhood of the sphere and lessening with distance from the same Just the same thing happens with the patient on the insulating platform connected either directly or indirectly to the prime conductor The air and ether about him receive the energy and the work in this instance is delivered to the patient, representing work of so many foot pounds or fraction thereof according to the electro-motive force and coulombs furnished The charge is passed into the ether by electric displacement This takes place along defined lines or curves which are called lines or curves of electro-static flux

After ten minutes' application the patient is very apt to volunteer the statement 'I feel so quiet and sleepy" When this condition exists it is an indication for ending the seance In my office I am in the habit of having such patients lie down or rest before leaving for their homes, and if they feel inclined to sleep encourage them to do so Upon examination such a patient's skin will be found warm, moist in the palms of the hands, the temperature which before treatment was subnormal raised more nearly to normal, the pulse either raised or lowered, as it was slow or rapid before, but invariably with improved volume while a sense of general well-being is experienced This beneficent influence may persist for an hour, even less, or it may last until the next day, seldom longer after a first treatment

Rarely do I allow such patients to talk during the time of administration, and for that reason I prefer to use an electrode connected permanently with the stand, rather than one in the hands of the operator One need only bear in mind the pathologic condition, the nature of the agent being used and what it does within the tissues, to appreciate the necessity of perfect quiet and relaxation in order to secure the best results Work, as we have seen, is being done Nerve cells must participate in the activity, whatever its ultimate nature, and by reason of this activity, energy is given them with corresponding ability to perform healthful functions This should be expended in that direction and not in an effort at cerebration or muscular movement Such effort can be made judiciously later on

There should always follow the treatment a sense of "glow" or warmth, and a feeling of well-being The vaso-motor nerves are stimulated, the cutaneous vessels dilated and activity of the skin established No treatment should be persisted in when this reaction takes place The perspiration appears first upon the palms of the hands, then upon the forehead, upper lip and finally, with the use of the disruptive discharge, all over the entire body

In rare instances it happens that instead of the desired reaction of cutaneous vaso-motor dilatation a vaso-constriction is established with contraction of the peripheral vessels, goose-flesh and coldness of skin, the surface is pale, the patient chilly and mentally irritable, uneasy and apprehensive, indicating that the blood vessels of the brain are also in a state of contraction Continuous treatments may abate this condition, but I have known it to persist to the extent that it seemed best to terminate the sitting, leaving the patient apparently unbenefited This state of affairs is most commonly observable in neurasthenics The best way to avoid it is to begin treatment very gently by aid of a mild convective discharge or "spray," and later on in the same sitting to use a stronger convective discharge or the "needle spray" This class of patients do not do so well under the disruptive discharge until the nutritional change has been established If good reaction follows the use of the "needle spray," they may be gradually accustomed to Franklinization by means of the disruptive discharge or "spark" applied preferably to the spine at the first sittings

It is common for neurasthenics, after the first treatment by the disruptive discharge, to experience an overpowering sense of lassitude and sometimes extreme muscular soreness This is no doubt due to the release of degenerated and toxic substances

Two classes of cases are appended The first from 1 to 16 are dispensary patients for whom change in environments, food, habits, etc, was not made, and for whom no medication was used The second, 1 to 8, are private or office patients for whom such medication was used as was indicated, as arsenic and iron, cascara sagrada in constipation and sodium bromid in the restless, sleepless and excitable cases The action of Franklinism is to increase the activity of drugs and very small doses are used

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[4] Houston and Kennelly Electricity in Electro Therapeutics

The nutritional improvement established is progressive and enduring In my experience if overstrain of any sort induces a relapse, it is but a modification of the primary condition and disappears quickly under treatment

One of the first results obtained from the judicious use of the Franklinic current is relief from insomnia In five years I have not prescribed a hypnotic save on one occasion for a business man who could not take time to come for treatment I am in the habit of giving 10 to 15 grains of sodium bromid three times daily for the first few weeks of treatment in order to prevent undue expenditure of the energy until such a time as the nutritional changes are established In cases of obstinate insomnia among dispensary patients nothing is given or permitted save the general Franklinization with careful localization to the spine, especially the nape, and preferably with the frictional spark The results in the latter class of cases have been good It must be borne in mind, however, that the extremely nervous, restless and irritable type of neurasthenic patients, are more frequently met with in private than in dispensary practice

The constipation from which neurasthenic patients in common with many others suffer is almost invariably relieved by the Franklinic treatment, the relief resulting in consequence of improved nutrition The nutrition of the whole can not be established without the nutrition of a part Disease is arrested, modified or cured by curing the patient

In conclusion permit me to repeat that the grand function of Franklinization is to improve and restore nutrition not only of a part but of the whole, a function which indicates a usefulness as wide as the domain of medicine By reason of this function Franklinization is a means of inestimable value in the treatment of neurasthenia

DISPENSARY CASES

Case 1 —O F B male, age 56, physician, March 23, 1892 Cerebrasthenia with insomnia Duration two years Insomnia most marked symptom, resorted to 10 grains of sulfonal from one to four times weekly Sleep obtained much broken, waking every hour or two Nutrition poor

Treatment Franklinic current, positive insulation, frictional sparks to spine, localized to nape (insomnia), needle spray to head Ten treatments given, extending over three weeks The night after first treatment had seven hours of uninterrupted sleep Improvement continued, characterized by marked nutritional gain, improved appetite and sound, refreshing sleep

Case 2 —T C, male, age 42, single, clergyman, June 8, 1892 Neurasthenia, cerebro spinal Four years' duration Insomnia, occasional frontal headache, languid and distressed, easily moved to tears, appetite fair, distress and acid eructations after eating, flatulence, bowels regular Excessively thin

Treatment Franklinic current, positive insulation, needle spray to general surface, frictional sparks to spine and epigastrium First treatment badly borne, inducing a fit of weeping Three treatments given, extending over two weeks Interval between the first two, twelve days The night after the first treatment patient slept well, also the following night, and felt better during the interval Sparks were better borne at third visit and patient expressed himself as feeling light and buoyant in consequence of the treatment The patient made a good convalescence

Case 3 —R D, male, age 29, designer, Sept 23, 1892 Neurasthenia Duration one year Unable to sleep until 3 o'clock in the morning, irritable and inclined to be morbid Spine ache, cervical, dorsal and lumbar Appetite fair, tongue coated, digestion impaired, bowels regular Weight 125 pounds

Treatment Franklinic current, positive insulation, long percussive sparks to spine and general surface, to epigastrium, also long and frictional to nape Forty two treatments given, extending over six months Immediate results from first treatment, less nervous and a more buoyant feeling At second visit reported that he was sleeping better At end of two weeks less depressed, sleep improved, also appetite At end of third week had gained three pounds, at end of fifth week four pounds, and at end of three and a half months seven pounds Continued his work during treatment Discharged, recovered

Case 4 —W A J, male, age 57, married, hotel keeper, July 5, 1893 Neurasthenia Extreme nervous shock following an accident twenty five years prior to admission Not well since Complained of loss of power in left arm and hand Pain from occiput down to lumbar enlargement, no spinal lesion Sleeplessness

Treatment Franklinic current, positive insulation, long percussive sparks to entire surface of body, localized to spine and affected arm Returned for second treatment July 7, 1893, when he complained that it had made him worse, said he felt sore and tired all over, as though beaten, but that he had slept all the previous night and again during the entire morning This case is reported simply to indicate the necessity for a more gentle application to a neurasthenic patient at first

Case 5 —N C M, female, age 27, single, saleswoman, Dec 9, 1891 Neurasthenia with hysteric symptoms Not well for eight years Contracted gonorrhea eight years prior to admission, acute attack three weeks' duration, abscess in groin, opened externally, six months later pregnant, abortion procured at two months, four years ago pelvic trouble irritable bladder from that time In August last, gave birth to a living child, less well since On admission headache back ache, especially lumbar and sacral, pain in right groin and dragging sensation, marked irritability of the bladder, capricious appetite, distress and heaviness after eating constipated bowels, extremely nervous, sleepless, depressed and hysteric Tenderness on pressure over spine, entire length Uterus normal, ovaries neither enlarged nor sensitive, sensitiveness on pressure over fundus of bladder, general nutrition fairly good

Treatment Franklinic current, positive insulation, long percussive sparks to spine, localized to nape, lumbar and sacral plexuses, hepatic area and abdominal walls and entire general surface Sixty six treatments given, extending over eleven months At fourth visit, sleeping better, slight improvement in digestion Improvement slow, marked by many relapses into former condition Eventually, however, a marked improvement in general health was noted, with increased strength, lessened nervous irritability, better self control, regular bowels, diminished pelvic discomfort June 10, 1892, went into the country for two months Seven applications were given after her return, when she discontinued her visits in better health than she had been for many years

Case 6 —C R, male, age 32, married, carpenter, Feb 8, 1893 Neurasthenia, with hypochondric symptoms Duration two years First noticed sense of pressure across chest, unable to breathe freely, breathless upon exertion Past year difficulty of breathing, nervous pain at back of neck, and entire length of spine, appetite fair, distress after eating, bowels regular, occasional frontal headache, depressed and self centered, unable to work with any regularity, circulation poor, all organs interrogated, but no lesion discoverable

Treatment Franklinic current, positive insulation, long percussive and frictional sparks to spine and general surface, localized to nape and to epigastrium Eight treatments were given extending over one month At second visit felt much better At fifth visit circulation much improved At seventh visit improvement much more marked, no depression, "catch" in back gone, also difficulty in breathing, no epigastric heaviness One more treatment given and patient discharged, recovered

Case 7 —J R, male, age 29 married, butcher, March 24, 1893 Sexual neurasthenia Not well for a year and a half Morbid, depressed and self centered Twitching movement first in left shoulder, then in right, then in back of neck, then in eyes No trouble when quiet and not at work Unable to "fix his mind' on anything, general health [illegible] good, bowels regular, sense of numbness front of thighs, knee jerk normal History of gonorrhea before marriage Sexual excesses since

Treatment Franklinic current, positive insulation, long percussive sparks to spine and general surface, localized to lumbar and sacral plexuses, anterior surface of thighs, and with director electrode to perineum from anus to scrotum At third visit reported much better after second treatment, with diminution of distressing sensations At fourth visit less dejected, felt stronger At fifth visit no muscular twitchings Eight treatments given extending over one month and at last visit, April 24, 1893, could fix his mind on what he read or was doing, no muscular twitching, no distressing symptoms, skin clearer, expression bright and hopeful

Case 8 —S F, male, age 29, single, brass polisher, July 10, 1891 Sexual neurasthenia, masturbation, nocturnal emissions, pain in back, lumbar and sacral, headache, appetite good, digestion fair, complexion muddy, anemic, heart irregular, no murmur, palpitation, sleepless

Treatment Franklinic current, positive insulation, long percussive sparks to spine and general surface, localized to nape, lumbar and sacral plexus, and with director electrode to perineum from anus to scrotum Nineteen treatments given extending over four months An interval of twelve days between first and second treatments, sleeping better, no emissions Improvement continued, and on Nov 16, 1891, visits discontinued, general health improved, sleeping well, relieved of pain in back and head Second admission Sept 1, 1893, well for one year after treatment On admission, pain in back, lumbar and sacral—also in right sciatic, tenderness on pressure at sciatic notch, middle of thigh, popliteal space, in knee, calf of leg and ankle, sensation as though asleep, insomnia, nervous, badly nourished, bowels regular Eight treatments given extending over seven weeks Relief established at once and continued Discontinued visits Oct 20, 1893, recovered

Case 9 —S E, female, age 38, widow, seamstress, Sept 6, 1893 Neurasthenia, three years duration, nervous, easily depressed, morbid fears, backache—sacral Sleep broken, bad dreams, buzzing noise in left ear, afraid of dying, appetite good, gaseous eructations, bowels regular, weight 110¾ pounds

Treatment Franklinic current, positive insulation, needle spray to head and general surface for fifteen minutes with a few long percussive sparks to spine Spray used at first to establish confidence Nine treatments given extending over six weeks At second visit looked brighter At third visit patient said she was better At fifth visit less depressed Able to come to clinic alone Weight 113½ pounds, gain 2¾ pounds Digestion improved, daily movements, and on Oct 20, 1893, patient discontinued visits Improved

Case 10 —B T, female, age 20, single reader, April 16 1894 Neurasthenia "irritable spine for eight years," tenderness on pressure in dorsal spine especially about midway Tired aching feeling in muscles of neck and shoulders, pain extended down both arms legs and arms felt as though asleep, worse at night, sleepless and restless, depressed, badly nourished, gaseous eructations irregular bowels

Treatment Franklinic current, positive insulation, long percussive sparks to spine and general surface localized to sensitive area in spine, muscles of neck, shoulders and arms Sixteen treatments given extending over twelve weeks Relief from first treatment lasted three and a half hours Nutritional gain established, relief from pain, aching and weariness bowels regular, sleeping well no depression Recovered

Case 11 —M K, female age 26, nurse, April 8, 1895 Neurasthenia duration six months, extremely nervous, weak, palpitation, gaseous eructations, bowels regular, amenorrhea for two months, pain in left ovarian region, general sense of exhaustion distressing dreams, backache, poor circulation, irritable cough Sensitiveness on pressure at lumbar spine Mucous membrane anemic, heart and lungs normal

Treatment Franklinic current, positive insulation spray to entire general surface over a period of three weeks Immediate result from first treatment, slept better after fifth treatment felt very well appetite good To the sixth and seventh treatments were added long percussive sparks to entire general surface, localized to spine, lumbar and sacral plexuses and abdominal walls Recovered April 8, 1896, patient has kept well during the year and able to work

Case 12 —K L, female, age 29, married, April 19, 1895 Neurasthenia Pain and weariness at back of neck insomnia, headaches, nausea and occasional vomiting, hysteric attacks, neuralgic pains, prolapsed ovary removed two years since, less pain since operation, laceration of the cervix uteri

Treatment Franklinic current, positive insulation, spray to entire general surface for fifteen minutes, localized to spine and ovarian region Three treatments given extending over a period of two weeks, to the third treatment was added long percussive sparks localized to lumbar and sacral plexuses, hepatic area and abdominal walls With the first treatment relief from constipation, head better, improved

Case 13 —J F L, male, age 31 years, married, Sept 6, 1895 Sexual neurasthenia with impotence Twelve years ago gonorrhea, followed by stricture Constant irritation of prostate, frequent urination, deficient muscular power anemic, voracious appetite, bowels regular, drinks and smokes to excess, depressed, morbid fears, easily fatigued Genito urinary organs normal

Treatment Franklinic current, negative insulation, long percussive sparks to entire general surface, localized to spine and with director electrode to perineum Three treatments given extending over a period of six weeks, improved

Case 14 —N female, age 41 years, widow, thirteen children, Sept 20, 1895 Neurasthenia, depressed, introspective, tired in the morning, throbbing pain under right scapula and precordia, dizziness, bowels regular, heavy feeling in epigastrium after eating, pain and tenderness in knees, very nervous, sharp pain in left side during last menstruation, weariness and aching and a sense of weakness in cervical region extending into arms, anemic

Treatment Franklinic current, negative insulation, spray to entire general surface for five minutes, followed by long percussive sparks to spine, hepatic area, abdominal walls, epigastrium and extremities Fifteen treatments were given extending over a period of two and one half months with marked improvement from the first, pain in shoulder and knee relieved, marked nutritional gain, improved circulation, increase in weight and disappearance of symptoms

Case 15 —M F, male, age 41 years, married, farmer, Sept 15, 1895 Neurasthenia, morbid fears and depressed Eight years since had gonorrhea No symptoms except dragging sensation in perineum and testicles No lesion other than a perineal eczema

Treatment Franklinic current, negative insulation, long percussive sparks to entire general surface, localized to spine, especially to lumbar and sacral plexuses also with director electrode to perineum Twelve treatments given extending over nine and one half weeks, after second treatment less discomfort Disappearance of depression, morbid fears and tendency to introspection Recovered

Case 16 —J P, male, age 25, single, wire weaver Oct 11, 1895 Neurasthenia, sexual with impotence Duration four years weak feeling, short breath on exertion, has had gonorrhea, painful micturition, irregular in quantity, impaired vision, falling of hair, seminal emissions two or three times a week and no muscular power, varicose veins of scrotum, morbid fears, depressed, introspection

Treatment Franklinic current, negative insulation, long percussive sparks to entire general surface localized to spine, especially lumbar and sacral plexuses and with director electrode to perineum Nine treatments given extending over a period of eighteen days Recovered

Case 17 —C W, male age 29 years married, laborer, Oct 24, 1895 Sexual neurasthenia Five years ago sexual indulgence excessive, for last four years mucous discharge from urethra, last six months backache, headache constantly for last two months For one year sexual desire diminished tired and drowsy on rising, forgetful and despondent, bowels constipated

Urine analysis Specific gravity 1012, granular casts, urea 1 2 per cent, acid reaction

Treatment Franklinic current, negative insulation, long percussive sparks to entire general surface, localized to spine, especially to lumbar and sacral plexuses, hepatic area and abdominal walls and with director electrode to perineum Four treatments extending over a period of one week, relief from pain in back, stronger Urine analysis, specific gravity 1024, acid, no casts Urea 2 4 per cent

OFFICE CASES

Case 1 —A H, March 12 1895, age 51, widow, superintendent of hospital Neurasthenia, duration four years, menopause at 49, anorexia, nausea and vomiting, flatulence, constipation alternating with diarrhea, headache, spine ache, cervical and dorsal, insomnia, nervous and depressed

Treatment Franklinic current, positive insulation, needle spray to entire general surface, localized to spine and epigastrium for fifteen minutes Twenty treatments given extending over a period of one and one half months To the sixth and following treatments were added long percussive sparks to spine, nerve trunks and distribution April 22, 1896 This patient has been actively at work during the past year and reports to me under present date that she is well

Case 2 —Mr H Feb 14, 1895, age 40 Neurasthenia, duration two years, morbid, depressed, nervous and melancholy, insomnia anorexia impaired digestion, constipation, thin, impaired strength

Treatment Franklinic current, negative insulation, needle spray with crown electrode for ten minutes and long percussive sparks to entire general surface, twenty treatments given extending over a period of two months After the first treatment no change looked cold, wan and apprehensive, reaction not good The disruptive discharge badly borne and discontinued, second treatment needle spray to entire general surface for fifteen minutes, to third treatment added frictional sparks localized to spine from nape to lumbar enlargement for two minutes At tenth treatment long percussive sparks given Patient did not sleep so well No doubt over stimulated by the action of the sparks, but as in my judgment the time had come when the disruptive discharge was indicated I persisted in the use of long percussive sparks to the entire general surface localized to spine, especially nape, lumbar and sacral plexuses, hepatic area and abdominal walls Marked and continued improvement April 9, almost complete disappearance of symptoms, sound and refreshing sleep, good appetite, good color increased strength, less nervous, bowels regular, slight gain in weight

Case 3 —Mr J B H March 19, 1895, age 48 Neurasthenia Within the last ten or fifteen years has broken down several times from over strain two days since felt worse than usual, took a drink of whisky, went out, fell down, got up and wandered about, knowing nothing of his whereabouts Not an intemperate man Congestive condition at base of brain, sense of fullness in left ear and on left side with inabilty to move head around quickly without pain vertigo, sometimes falls, when walking sense of falling, two years ago marked weakness of left side amounting to paresis for twenty four hours, gradually improved, marked tremor of right arm and hand insomnia exaggerated mental activity, knee jerk slightly diminished, general health good some backache, lumbar and sacral is obliged to consider his coordination, pupils respond to light and to accommodation, far sighted

Treatment Franklinic current, positive insulation, needle spray for fifteen minutes, followed by long percussive sparks to entire general surface, localized to spine, from occiput to lumbar and sacral plexuses, sciatic nerves and distribution frictional spark to nape Treatment induced free perspiration followed by relief from pressure at base of brain Twenty two treatments given extending over a period of six weeks Improvement with first treatment, improvement continuous, and after one month relieved of former symptoms and better than before the acute attack in March May 29, recovered

April 22, 1896, patient has been well during the year

Case 4 —J W P Oct 26, 1893 Male, age 41, single, teacher, neurasthenia with hypochondriac symptoms Duration two years, sense of dizziness at first not localized, now occipital pressure sub occipital, numbness, creeping in left side, arm, leg and side of body, sometimes on right side but not to such an extent as on left, intolerable sleepiness in the afternoon with slight rise of temperature, queer feeling in head relieved by counter pressure, darting pain in course of spinal accessory nerves increased by excitement, constant consciousness of a feeling as though force pump sending blood down heels, excessively nervous, sensation of "lump" mid way dorsal spine, feels suddenly now and then a touch here and there, sometimes hot and cold then gone, sees double disks at times which coalesce, eyes astigmatic, sleeps very well, except when under excitement, dreams, profoundly depressed, great nervous irritability, morbid fears, thinks he will become insane, appetite good, gaseous eructations, no heaviness, bowels regular knee jerk normal, stands and walks well, no incoordination, pupils respond to light and accommodation, palpitation on effort or with emotion

Treatment Franklinic current positive insulation, needle spray for fifteen minutes, followed by long percussive sparks to entire general surface, localized to spine especially nape for five minutes Forty treatments given extending over a period of six months and twelves days Following first treatment relief of discomfort in head which lasted nine hours November 21 no longer thinks of becoming insane, amelioration of pain in back of neck Subsequently slight exacerbation due to an attack of "grippe" After recovery from "grippe" improvement continued, floor and ground do not wave under him, eyes accommodate better April 29 Improvement established has been maintained during the past two years and a half, no return to former conditions

Case 5 —D I P Dec 12, 1892 Female, age 36, married Seven years since acute nerve exhaustion, since then backache, sacral, irritable bladder, leucorrhea appetite capricious, nausea, distress and heaviness in stomach, flatulence, intestinal, constipation, hemorrhoids, headache, neurasthenic helmet and sub occipital, sensitiveness to noise emotional, easily moved to tears, profound depression, confusion, weariness in head, possessed of fear all the time, afraid to go out alone, thin, pale Examination immense cluster of hemorrhoids, external, largest size of walnut, ulcerated, half a dozen smaller ones lacerated cervix endometritis, hyperplasia, anemia, heart and lungs normal Treatment Franklinic current, positive insulation, spray to entire general surface with a few sparks to spine at first Subsequently long percussive sparks to entire general surface, and frictional sparks to spine Fifty one treatments given extending over a period of six months and fifteen days, after nine days no depression, no headache, nervous fears very much less appetite better bowels acting better from Dec 12, 1892 to Jan 5, 1893 gained three and one third pounds, passed first menstrual period without local pain, sense of pressure and pain in varicose veins of right leg, usually exaggerated at menstrual period markedly less After one month's treatmeat she came alone to the office, first time she had gone out without some member of the family in six years, continued to improve so far as neurasthenic condition concerned notwithstanding the fact that she was absent from regular treatment from January 18 to February 20, during which time I operated on hemorrhoids By the middle of March able to work and assume the care and responsibility of her family, May 9, normal movements for past ten days before no action without medicine After symptomatic relief was established in consequence of the nutritive changes set up by general Franklinization, uterine treatment was given with the continuous and induced currents according to indications Recovered October 1894, returned with nervous symptoms due to fright and excitement After two weeks treatment restored to former condition

Case 6 —S V A, Oct 5, 1895 Female age 48 teacher, neurasthenia, duration fourteen years, broken down at that time, rested one year, menopause five years since better at times, appetite fair, no indigestion bowels regular, pain back of neck extends at times over head, occasional supra orbital pain, insomnia, extreme nervous irritability, pricking sensation all over, especially calves of legs morbid and unreasonable over little things feels like crying bronchial irritation with cough post nasal discharge, slightly deaf, anemic

Treatment Franklinic current, positive insulation, spray to entire general surface for ten minutes, frictional sparks to spine, especially nape Fourteen treatments given extending over a period of one month and four days, felt better from first treatment Treatment suspended for a month or two recommenced and continued once a week to date Marked nutritional improvement, able to keep at work all winter Relief from all distressing nervous and mental symptoms

Case 7 —R W May 2, 1895 Female single, neurasthenia with hysteric symptoms Duration nine years, eight years since both ovaries and tubes removed, history of abscess since operation, discharged per rectum pus no blood, occasional backache, intestinal flatulence, constipation, during winter acute attack of stomach and intestinal indigestion tired head, sensitiveness on pressure over cervical and lumbar vertebræ paresis of facial muscles in October, insomnia depressed nervous irritable, self centered, excessively thin, worn and ill looking, worse in the morning

Treatment Franklinic current, positive insulation, needle spray to entire general surface, localized to spine and right sciatic Thirty six treatments given extending over a period of two months After a week improved sleep bowels more regular To eighth treatment added long percussive sparks to spine, lumbar and sacral plexuses, sciatic nerves and distribution, to epigastrium and abdominal walls Improvement continuous, gained eighteen pounds under treatment

Case 8 —A H W March 16, 1893 Female married, age 34 Neurasthenia Not well since first confinement eight years ago, unable to stand, conscious of pelvic organs bearing down veins of both legs, anterior surface, enlarged February 1891, operation on cervix and perineum Backache constant, vesical pain, leucorrhea, increased by exertion or undue fatigue, post menstrual exhaustion headache, fullness of head, pressure at nape, distress in spine, especially dorsal insomnia, nervous and excitable, irritable, despondent appetite capricious flatulence gastric, constipation anemia circulation poor, appearance of faulty elimination

Treatment Franklinic current, positive insulation, spray to entire general surface for ten minutes, sparks to spine At subsequent treatments long percussive to entire general surface localized to spine Forty five treatments given extending over a period of four months, marked improvement from the outset After two months walked one and one half miles and took a bicycle lesson of twenty minutes without fatigue, no backache save when over fatigued, appetite good, bowels regular Recovered June 28, 1894, confined

April, 1895, operation, curettement and trachelorrhaphy May 9, 1895, came under writer's care again Incomplete union at site of highest stitch right side of cervix, perineum extremely sensitive, pelvic congestion, vaginal walls relaxed, anterior wall prolapsed, constant sense of discomfort, bowels constipated, liver inactive, skin sallow and pigmented

Treatment Franklinic current, positive insulation, needle spray to entire general surface, localized to spine for twenty minutes Eleven treatments given extending over a period of one month and three days with disappearance of symptoms, as well as improved local conditions

HOMICIDE IN THE UNITED STATES

Read before the American Academy of Medicine

BY PAUL BARTHOLOW, B A, M D

PHILADELPHIA

Murders are of very great frequency in this country The number reported last year was 10,500, an enormous figure! We might if there were not some reasons against it, take this number as the annual average, which in most countries is a fairly constant quantity But here, owing to some conditions that I shall endeavor to particularize, the amount of homicide in any year, taken as a standard, does not give us the least reason for predicting that the succeeding year will be marked by a similar number of murders, neither many more nor less In 1885, for instance, the homicides reported numbered 1,808, in 1890, 4,290, in 1894, 9,800, and I have just mentioned 10,500 in 1895 That is to say, there was nearly six times as much homicidal crime reported last year as in 1885, an increase almost in arithmetical ratio In a word, the population loses every year from murder as much as from a battle or a plague Such an amazing development of murder has never before been observed in any other country There must be some especial cause or causes at work to produce such a result, but, before entering upon a discussion of these, let us undertake a comparative view of the above figures We shall thus be enabled fully to appreciate their gravity Let us take as affording a sufficiently vivid comparison, the amount of homicide perpetrated in war The total killed in battle on the Federal side during the late war was in round numbers 49,000 (Medical and Surgical History of the Rebellion) That is an annual average of little more than 10 000 (the time being a period of nearly five years), or about the same as the total number of homicides reported last year During the Franco Prussian war of 1870, the Germans lost in battle 17 500 men, a figure that sinks into insignificance beside our total of homicidal crime, for the conditions favoring homicide in war are or ought to be vastly greater than the conditions favoring it in peace (Oettingen, die Moralstatistik, p 729)

Again, let us compare last year's total of murders with the annual average of other countries In order to make this comparison as absolutely true as possible, I shall adopt the method of estimating the total amount of murder during any given period, recommended by Bosco, who has studied this subject with the greatest care In his own words, his method is described as follows "As the composition of the population, with respect to age, varies in different countries and as it has to be remembered that all the population under ten years of age has no share, at least under normal conditions, in the crime of murder, it has seemed to me a more exact method to calculate the proportion of murders to the inhabitants who are over ten years of age than to include the total population " (Quoted by Morrison Crime and its Causes, p 30) I may mention here that with respect to this country, such a method of calculation is extremely difficult The composition of the population varies greatly, in some States there is undoubtedly a preponderance of adults, in others, on the other hand, the proportion of children under 10 years of age is probably very high, in such regions as Pennsylvania and New York, for instance, where the birth rate is respectable and the casualties, inevitable amid such enormous trade and manufacture, are great and compose very material losses of adult population, we have powerful causes tending to raise the proportion of children under 10 It might be supposed that immigration, including chiefly adult males, would neutralize this result Doubtless it does modify the proportion of children to adults, but not, I think, to any great extent In fact, considering the high birth rate in those sections that receive the most immigration, and considering, too, that the rate throughout the country is normal, I think we shall not be far wrong in supposing that the proportion of children under 10 years of age is as great here as in England or Germany Supposing then the population of the United States at the present day to be 65,622,000, which is reached by calculating the excess of births over deaths and the amount of immigration since the last census, when the population was put at about sixty-two millions, and taking off 20 per cent of the whole as representing the population under 10 years, we ought to get the total population which under normal conditions, as Dr Bosco puts it, might be physically able to commit murder The total thus calculated is 52,478,000 Taking last year's number of homicides, and calculating the rate per 100,000 of population we get the high proportion of 20 Comparing this rate with the rate in other countries, according to Bosco's tables, we find that homicide is a fourth higher here than in Italy, nearly twice that of Spain, nearly five times that of Austria, nine times that of France, nearly twenty times that of England, Scotland or Germany All this is bad enough In order, however, to bring this high rate into greater relief, let us compare it with the rate in India We have, as Mr Morrison tells us, excellent statistics of Indian crime It is, besides, a country that in point of size and severity of climate, resembles our own We might, if it were not for some social prohibitive causes, expect a high rate of murder But what is really the fact? In Mr Morrison's words, "India stands to-day in the proud position of being more free from crimes against the person than the most civilized countries of Europe" Astonishing as it seems, India with its 185,000,000 of population over 10 years of age has an annual average of but 1,930 cases of homicide, scarcely one-fifth of the number last year in our population of 52,000,000! In other words, in India with its enormous population the rate of homicide per 100,000 of population is but 1 31, a percentage unmeasurably inferior to ours Mr Morrison ascribes this low rate of homicidal crime to the prohibitive influence of caste, but before undertaking a discussion of this subject, let us look at these figures from another point of view The annual average of homicide in India is the whole number of cases of murder reported and presumably the whole number committed, which is not the case with regard to this country. There is, therefore, this remarkable fact established with respect to crime in India, that we really know the amount of murder committed annually, not approximately (as we do of England and the United States) but as nearly as possible absolutely, and this amount, considered from this point of view, is but one half that of England and but 1-34 that of the United States. I can not do better here than put the matter in Mr Morrison's words. "The number of cases of homicide in India committed by persons over 10 years of age and reported to the police is smaller per 100,000 inhabitants than the number of cases of the same nature *brought up for trial* in England (italics mine). In order to appreciate the full importance of this difference it has to be remembered that in England a great number of cases of homicide are reported to the police for which no one is apprehended or brought to trial. In the case of the notorious Whitechapel murders, which horrified the country a year or two ago, no one was ever brought to trial, hardly any one was arrested or seriously suspected. These crimes and many others like them materially augment the number of homicides reported to the police, but they never figure among the cases annually brought for trial before assizes. As a matter of fact no one is ever tried in more than one-half of the cases of homicide reported to the police in the course of the year. In the year 1888, for instance, 403 cases of homicide were reported to the police in England and Wales, but in connection with all these cases only 196 persons were committed for trial. In short, double the number of homicides are committed as compared with the persons tried, and if a comparison is established between India and England on the basis of homicides reported to the police, the outcome of such a comparison will be to show that there are annually more than twice as many murders committed per 100,000 inhabitants over the age of 10 in England than there are in India."

I have said that in the United States there are every year thirty-four murders where there is one in India. The real number is probably much higher. But it is, unfortunately, very difficult to calculate this number, except approximately, for statistics of the number of persons tried as compared with the number of murders committed are, as far as I know, not to be had. But, fortunately, we possess statistics of the number of executions, and we may draw some inference as to the amount of murder in the country by ascertaining the proportion of executions to cases reported, and comparing this proportion as it exists in various countries. For it is generally known that the frequency of capital punishment is a tolerably accurate indication of the amount of murder prevailing, a high rate in the one being accompanied by a high rate of the other. If, then, we find that the number of executions, as compared with the number of cases of homicide, is relatively large, we might infer that murder in the country under consideration is really, and not apparently, of correspondingly common occurrence. And, incidentally, finding the proportion of executions to cases reported we might be able to estimate the number of cases tried, a better method it would seem, according to Bosco and Morrison, of calculating with accuracy the absolute amount of homicide in the country during a given period.

In such an inquiry we have to remember that the proportion of executions to trials must be small, unless we suppose that the cases of homicide reported are cases of willful murder—a rash supposition that may be dismissed. And we must also ask ourselves whether the death penalty, for any reason in law is likely to be enforced in some countries in cases where in others it would not. Doubtless there is a difference in this respect between countries like England and the United States and countries like Germany and Austria. But this difference need not occupy us particularly if we find that the proportion of executions to cases reported is so much greater in the former countries as to outweigh any effect that the superior mildness of Continental law in this respect may have. Nor, again, need we be scrupulous in affirming our comparison if we find that with this higher proportion of executions there is admittedly a greater laxity in the administration of the criminal law, a laxity that may, and does, materially decrease the number tried, if not the very cases that would, under a better condition of things, augment the total of executions.

To proceed then with our view, we may take Germany, as furnishing of all other countries the most striking example of a high rate of cases convicted and an exceedingly low rate of executions. In that country, as in India, it is probable that very few cases are reported that are not tried and very few tried that are not convicted. In Germany, for instance, of 567 cases of homicide in 1882, there were 476 convictions and but 9 executions, or 02 per cent of convictions. In England in 1891, 19 persons suffered the extreme penalty, about 12 per cent. In 1890, in the United States, there were 4,290 cases of homicide reported and 102 executions by law. Assuming that convictions amounted to one-fourth the number of murders reported, a generous estimate, and taking from that 127 cases summarily executed without trial, we have left 948 convictions, of which 102 or 10 7 per cent were condemned to death. Thus, in other words, in Germany, where convictions are relatively frequent, we see a correspondingly low percentage of death sentences, while on the other hand, in England and the United States, where convictions are not so common, the amount of capital punishment is considerable, including, in fact, in England, about one-seventh of the cases tried. Even if we should dismiss the cases of murder reported in the United States on the ground that the report is inaccurate, and take merely the combined legal and illegal executions for a single year, the 303 of last year, for instance, as furnishing an estimate of the amount of murders in the country (it being undeniable that an execution, whether legal or illegal, is as good an indication as a trial that a murder has been committed), we should still have to record an enormous excess of homicide here over other countries. For what are 19 executions or 9, in comparison with 303?

It is impossible in fact not to believe that the high proportion of death sentences is an intimation not only of the gravity and prevalence of murder, but of some defect in the machinery of the criminal law, influencing judges to extreme severity in punishing crime when proved, and, not unlikely, as a means of consciously or unconsciously satisfying public vengeance. We might attain a stronger conviction of the truth of the foregoing estimate by comparing the numbers convicted with the numbers tried. There is a wide difference in countries this [illegible] ect. A very able student, Mr Morri quoted, observes: "In some countries very few convictions may take place in proportion to the number accused, while in other countries the proportion may be considerable. In other words, in order to arrive at an approximate estimate of the amount of murders committed in a country, we must consider how many cases of murder have been tried in the course of the year. It very seldom happens that a person is tried for this offense when no murder has been committed, and it may therefore be assumed that the crime has taken place when a man has to stand his trial for it. Estimating, then, the prevalence of murder in the various countries by trials, rather than convictions, it will be found that Germany, with a much larger percentage of convictions than England, has just as few cases of murder for trial. And the reason the number of convictions, as between the two nations, differs, arises from the fact that a prisoner's chance of acquittal in England is 100 per cent greater than it is in Germany. It is not, therefore, accurate to assume that a greater number of murders are committed in Germany than in England because a greater number of persons are annually convicted of this crime, all that these convictions absolutely prove is, that the machinery of the criminal law is more effective in the one country than the other. To take another instance, more persons are annually tried for murder in Ireland than in France, but more cases of conviction are recorded in France than in Ireland. These contrasts show that, while the French are less addicted to this grave offense than the Irish, they are more anxious to secure its detection, and that a greater body of public opinion is on the side of law in France than in Ireland. While thus showing that the number of trials for murder is the best test of the prevalence of this offense, it is not meant that the test is in all respects indisputable. At most it is merely approximate. One obstacle in the way of its entire accuracy consists in the circumstance that the proportion of persons tried, as compared with the amount of crime committed, is in no two countries precisely the same. In France, for instance, more murders are perpetrated for which no one is ultimately tried, than in Italy or England, that is to say, a murderer runs more risk of being placed in the dock in this country than in France. But the difference between the two countries is again to a great extent adjusted by the fact that once a man is placed in the dock in France, he has far less chance of being acquitted than if he were tried by English law. On the whole, therefore, it may be assumed that the international statistics of trials, corrected when necessary by the international statistics of convictions, present a tolerably accurate idea of the extent to which the crime of murder prevails among the nationalities of Europe."

In order to estimate the number of trials for murder in this country, and apply this test in its rigor we must look, in default of better means, at the statistics of our prisons. We can find these in the Compendium of the last census, namely for 1890. In that year the number of persons in prison for homicide was 7,500. As there reported in the years 1885–90 an annual average of more than 3,000 cases of homicide, it is evident at once that the proportion of persons tried and convicted of that crime as compared with the number of cases reported, is insignificant. Assuming that the persons in prison for homicide in 1890 were all recruited from the cases extending over the years 1885–90, which is hardly true as some of them must have been imprisoned at an earlier date, and assuming that as many cases were reported as were tried, during those years, we still have a large excess of trials over convictions, and, what is worse, we must conclude that a considerable number of undoubted murders, supposing that some one was tried for them, are not represented in the numbers of the prison population, nor can it be supposed that this deficiency is made up by the number of persons executed, a number far too small to make good the discrepancy. There is, of course, in every country an excess of trials over convictions. In England in the years 1882–6, 1.6 per cent. of the population was annually tried for murder and 0.76 per cent. convicted. In Germany during the same period 1.61 per cent., were annually tried and 1.35 per cent. convicted. In the United States, basing our estimate on the number in 1890, and taking the annual average of committals during the years 1885–90 as 1,250, or in other words taking this as the number of convictions, although the real number must obviously be much lower, and assuming that the trials averaged half the cases reported during that time, we have an excess of trials over convictions of one-fifth, an excess of cases reported over convictions of twelve-fifths. Lastly, to take India, as a country most like our own in respect to climatic conditions, the most powerful influences in causing homicidal crime, we find the annual average of cases reported to be 1.31 per cent. and the annual average of convictions 0.46 per cent., an excess of cases reported over convictions of 2.8 or fourteen-fifths, an instructive result that points to a mild administration of the criminal law in India, a result too that incidentally shows us that a laxity in this respect is not necessarily in that country a provocative of crime.

And this brings us to the curious inquiry as to the causes of the prevalence of murder. We have just seen that though in India, as in England, the percentage of convictions is not high, yet India, as compared with England and the United States, is singularly free from crimes of blood. A hot climate, as Professor Ferri has shown, is one of the most potent causes of the prevalence of homicide, and we might expect therefore that India, as compared with England, would show a high percentage of murder. Yet this is not the case. As compared to the United States, where the climate is marked by harsh extremes and often unexpectedly severe weather, we might look for a lower percentage, but this too is far from being true. To what, then, is the difference due? It is most plausibly argued by Mr. Morrison and Sir William Hunter that the immunity of India from crimes of violence is due to the influence of caste, and, while, admitting the unfavorable effects of the Indian climate, they believe that caste is powerful enough to repress those effects. By looking at their arguments, we shall get, I think, not only the most just and philosophical view of some of the deeper and more persistent causes of the crime of murder, but also an illustration, an analogy that may usefully be applied in determining the causes of murder in our own country. Let us take Mr. Morrison's view first. "The peculiar structure of society," he says, "is unquestionably the most satisfactory explanation of the high position occupied by the inhabitants of India with respect to crime. The social edifice which a people builds for itself is among all civilized communities a highly complex product, and consists of a great agglomeration of diverse materials. These materials are partly drawn from the primitive characteristics of the race, they are partly borrowings from other and contiguous races, they are to a considerable extent derived from natural surroundings of all kinds, and in all circumstances they are supplemented by the genius of individuals. In short, all social structures, when looked at minutely are found to be composed of two main ingredients—race and environments, but these two ingredients are so indissolubly interposed that it is impossible to say how much is to be attributed to the one, and how much to the other, in the building up of society. But if it is impossible to estimate the value of the several elements composing the fabric of society, it is easy to ascertain the dominating idea on which all forms of society are based. That dominating idea, if it may for the moment be called such, is the instinct of self-preservation, and it exercises just as great a power in determining the formation and play of the social organism as it exercises in determining the attitude of the individual to the world around him. In working out the idea of self-preservation into practical forms, the social system of most people has hitherto been built up with a view to protection against external enemies in the shape of hostile tribes and nations, the internal enemies of the commonwealth—the thieves, the housebreakers, the disturbers of public order, the shedders of blood, the perpetrators of violence— have been treated as only worthy of secondary consideration. The structure of society in India is, however, an exception to the general rule. External security, or in other words, the desire for political freedom has, to a great extent, become extinct in wherever the principle of Brahmanism has succeeded in taking root. These principles have been operating upon the Indian mind for thousands of years, their effect in the sphere of politics excited the wonder of the ancient Greeks, who tell us that the Indian peasant might be seen tilling his field in peace between hostile armies preparing for battle. A similar spectacle has been seen on the plains of India in modern times. But Brahmanism, while extinguishing the principle of liberty in all its branches, and exposing its adherents to the mercy of every conqueror, has succeeded, through the caste system, in bringing internal order, security, and peace to a high pitch of excellence. This end, the caste system like most other religious institutions, did not and does not directly have in view, but the human race often takes circuitous routes to attain its ends, and while apparently arriving at one object, is in reality securing another. The permanent forces operating in society often possess a very different character from those on the surface, and when the complicated net work in which they are always wrapped is stripped from off them, we find that they are some fundamental human instincts at work in disguise."

"These observations are applicable to the caste system. This system, when divested of its externals, besides being an attempt to satisfy the mystic and emotional elements in the Indian heart, also represents the genius of the race engaged in the task of self-preservation. The manner in which caste exercises this function is thus described by Sir William Hunter. 'Caste or guild,' he says, 'exercises a surveillance over each of its members from the close of childhood until death. If a man behaves well, he will rise to an honored place in his caste, and the desire for such local distinctions exercises an important influence in the life of a Hindoo. But the caste has its punishments as well as its rewards. These punishments consist of fine and excommunication. Anglo Indian law does not enforce caste decrees. But caste punishments exercise an efficacious restraint upon unworthy members of the community, precisely as caste rewards supply a powerful motive of action to good ones. A member who can not be controlled by this mixed discipline of punishment and reward is expelled, and, as a rule, an outcaste is really a bad man. Imprisonment in jail carries with it that penalty, but may be condoned after released by heavy expiations.'

"These remarks of Sir William Hunter afford an insight into the coercive power exercised by the caste system on the Indian population. Without that system it is probable that the criminal statistics of India would present as high a proportion of crimes of violence and blood as now exists among the people of Southern Europe. But with that system in active operation, the evil influence of climate is completely neutralized, and India at the present moment enjoys a remarkable immunity from violent crime."

This admirable passage from Mr. Morrison displays in a very clear light the peculiar structure of Indian society. The chief difference from our present point of view between that society and ours is the fact that here the instinct of self-preservation has given away, as it has not in India, to the desire of possessing extreme political freedom. Here internal security, as compared with personal liberty, is of little importance, and although owing to the geographical position of the country the danger of its being disturbed by external foes is, indeed, very remote, yet, it does not seem so to the people, as the present prominence of the Monroe doctrine shows, who often are disposed to believe their external security is in jeopardy, not so much, it is true from an invasion of armed enemies as from the importation of ideas, hostile to the prevailing conceptions of personal liberty. As there is not this danger, except in the most remote degree, it would seem expedient to the people to turn their attention to the consideration of their internal security, but it being well understood that the attainment of a great degree of internal security would mean sacrifices of individual liberty, it is scarcely to be expected, the popular mind being really at bottom extremely conservative, that any change of an opinion in this respect will soon take place. In fact the importance of external security is as much exaggerated here as it is kept in abeyance in India, and thus we have the curious contrast of two countries, alike in possessing a severe climate, alike in variety and greatness of natural surroundings, yet presenting the widest differences socially and with respect to crime.

They are also utterly dissimilar with regard to industrial activity, which here is enormous and in India comparatively inconsiderable. The difference is important and, as it will be seen, partly explains the low proportion of Indian crime. For crime is found, according to the exact researches of Ferri and of Tarde, to be growing in steady relation to the growth of commercial enterprise and, it is also now a matter of certainty that not only is there this close connection between crime and industrial enterprise but there is besides, as Féré has shown, a triple relation established here, between crime commercial activity, the *surmenage* of modern [illegible] e and [illegible] ve disease. In other words Tarde [illegible] l that the commercial classes in various countries contribute the largest proportion of crime, they are also, as Féré tells us, the most afflicted with nervous complaints, with the exhaustion of the nervous system, so inseperable in some degree or other, from a busy, modern existence, and so fatally linked in its graver forms, with morbid and criminal impulses The agricultural and mechanic classes, on the other hand, whose pursuits are different, involving less anxiety and fewer temptations, prevent a smaller percentage of crime The coincidence therefore of the unexampled growth of crime and of industrial activity is justly held to be something more than fortuitous

It is the fashion to use the vague world "degeneracy" in connection with a condition of the nerves, supposed to be due to modern influences When the word is employed as it is by Krafft-Ebing, Kurella and Lombroso to describe a peculiar instability of the nervous system, accompanied by definite anatomic variations from the normal type and also by peculiar characteristics of mind, it is undoubtedly indicative of a physical and moral predisposition to crime A lesser degree of degeneracy, however, that acquired in pursuits too absorbing for the health and strength may, and does, predispose to crime, especially to homicide, a form of crime committed for the most part by persons who have reached any of the stages of mental and moral deterioration Nothing, indeed, is more conclusive with respect to the nature of this crime than the fact that an extremely large proportion of the persons convicted of this offence are found to be insane or mentally infirm Thus of 441 persons convicted of murder in the prisons of England, 143 or 32 per cent were declared unsound in mind In short, we are assured beyond any question by these facts and many others that might be instanced, that people who suffer in any degree from maladies of the nervous system, are particularly addicted, as compared with the healthy, to murder, that industrial activity, if too absorbing and severe, may produce various gradations of degeneracy of the mind and ner- us system, very often acquired, very often too, erited, and furnish with its increasing growth one the predisposing causes of the enormous develop- nt of murder in recent years

There is another circumstance connected with this bject, that I am tempted to touch upon before clos- g this paper It is that murder in this country is ry frequently committed by persons who act under a notion that they are inflicting just and necessary vengeance Such crimes, in which category we must place lynchings, happen for reasons of which the discussion belongs more to the sphere of law than medicine But the distinguishing mark of these crimes for us is that they are *national*, that is to say, they are caused by the exigencies of a race, not yet in perfect harmony with its environment, that does not seem to know, in fact, the *economy*[1] of crime I say *race*, for it is undoubted that, in the regions in which illegal executions are most frequent, a definite nationality has been formed, different in many respects from any type of the Old World[2] In other parts of the country the differentiation of the European races in America from any European type is rapidly proceeding, if, indeed, it has not already been consummated as was long ago observed by M de Quatrefages I am inclined to think that a large amount of crime is the result of the play of forces, social and physical, that are at work in this process of differentiation, and until these forces are met on the part of the inhabitants with a better comprehension of how to combat their evil influences, until it is known that the fever of business must subside, that the severities of climate must be mitigated, the excesses of political passions controlled, we may expect, what we have now in frightful amount, an increase in crime

MEDICAL VIENNA AND HEIDELBERG

NOTES FROM MY SKETCHBOOK

L HARRISON METTLER, A M , M D
CHICAGO ILL

Several surprises were in store for me at Vienna As I approached the city by way of the Danube, a day's sail upon which is as fascinating and full of historic reminiscences as a trip up the Rhine, I began to wonder whether a certain "waltz king" were not the victim of achromatopsia for the "beautiful blue Danube" is most emphatically a bilious brown in tint Again when I discovered that the capital of Austria is not on the Danube but a long way back from it on a very muddy canal and a very much muddier creek, my confidence in the veracity of a certain old schoolmaster received a rude shock To this insignificant creek, the Wien, does the proud city of the Hapsburgs owe its name Once more to my utter astonishment I found that the great city of Vienna, the real Vienna, is only about a mile long and a half-mile wide, while its apparent bigness is due to the incorporation of some thirty-six or more large suburbs immediately adjoining it From these suburbs the streets all converge, like the spokes of a wheel, toward the picturesque old cathedral of St Stephen in the heart of Old Vienna Unlike most other cities, the aristocratic portion, where the royalty, the nobility and the wealthy have their residence, is the most ancient The antiquity of this part of the city is revealed in the narrowness of its streets, the height of its buildings, its well paved but undulating thoroughfares, and its numerous dark alleys and covered byways A touch of orientalism is seen everywhere Encircling Old Vienna and occupying the site of the ancient ramparts, is a broad and magnificent boulevard, known as the Ringstrasse and adorned with parks, fountains, monuments, statues, and some of the city's finest examples of architecture, among them the splendid University The circle of suburbs stretches away beyond the Ringstrasse There is a wealth of history and legend in Old Vienna, its very life teems with music and art, its people are interesting to know and study, its customs are unique Excepting Paris, Vienna is probably the most beautiful city in Europe Its architectural elegance equals the brightest visions of the most florid imagination The first sight of its pomp and splendor so overwhelms the medical visitor with astonishment, enthusiasm and admiration, that it takes him several days to acquire sufficient calm and courage to look up the hospitals and gaze once more upon filthy sores and ugly tumors But, alas, it must be! Marble palaces, Gothic cathedrals, Greek temples, art galleries and museums, royal operas, Hofburg theaters, flower gardens and entertaining music, brilliant arcades, curious statues, magnificent monuments, fretted fountains, gorgeous shops and quaint markets, all must be passed by one who

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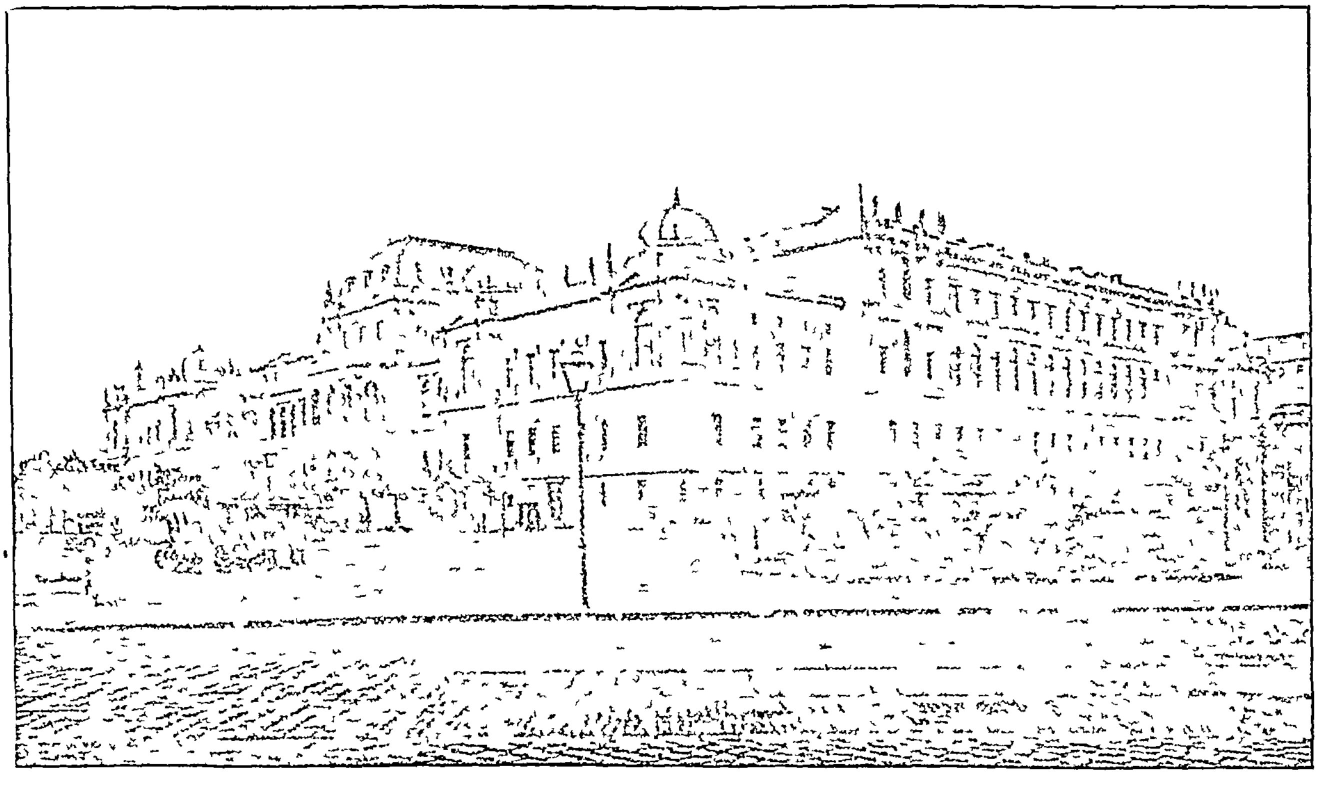
would know somewhat of medical Vienna and who has but a few days to learn it in. Medical Vienna, both educational and eleemosynary, is full of interesting history and practical suggestion. Go not then to the city of Marcus Aurelius and Maria Theresa, the carnival city of wine, woman and song, the city of the mystic meerschaum and the home of beauty and art, to study its medical life, unless you go as a student to take up a long residence there. If you go for a few days only, its wealth and magnificence will so enrapture you that your hours will have vanished ere you have had an opportunity of getting even a glimpse of the great University and the vast Imperial Hospital.

As everybody knows, Vienna leads the world at present in general medical education. The mere mention of such names as Billroth, Ludwig, Nothnagel, Chrobak, Schauta, Exner, Benedikt Kaposi, Politzer, Obersteiner and others, is enough to confirm her preeminence. And yet it was not always thus, for she was long outshone by France and Germany. In neurology and psychic medicine Paris even to day holds an exalted position, while in pathology and therapeutics Berlin has scarcely a rival. The reasons for the preeminence of Vienna are many. One is the cosmopolitan character, size and wealth of her population. The generous support and favor of the government in educational matters is another. Above all however, is the unusual concentration of learning in the capital and its matchless University. In Austria university education is pretty much the same as it is in Germany. I will have somewhat more to say about it in my sketch of Berlin. Even in Germany, where learning is so intensely cultivated, the twenty-one universities drain the educational resources of the empire more than do the seven universities of Austria. In both countries the university is a government institution and one of its four or more faculties is always that of medicine.

Within sound of the famous Strauss concerts in the Volksgarten and almost under the shadow of the lace-like Votivkirche rises the superb building of the University. A stone's throw from it are the Rathhaus, as fine a specimen of gothic as one can ever see, the Parliament Building in the style of the pure Greek, the gem-like New Hof theater, the Law Courts constructed after the most elegant renaissance manner, and many other great buildings, museums and monuments. The Franzensring is a veritable architectural paradise. The designer of the University was Ferstel, one of a brilliant coterie of artists who have added luster to the fame of the royal city. Its style is almost pure renaissance. Immense in size, massive in appearance, and compact, it is nevertheless graceful, chaste and attractive. Its sides are generally plain but its front is broken with galleries, facades and retrenchments. Its cornice is adorned with exquisite moldings, pediments and statuary, while its roof is varied with a large central dome and several smaller domes and cupolas. Its interior is quite as rich and ornate as its exterior, free use having been made of variously tinted marble. The University of Vienna is one of the oldest among the Germanic peoples, having been founded in 1237. Greatly to its advantage, it was reformed under Maria Theresa by her celebrated medical adviser Van Swieten. This famous old courtier physician seems to have been a pretty energetic fellow in his day. He was born at Leyden in 1700. He studied at the university of his native city and that of Louvain, ultimately becoming a pupil of the immortal Boerhaave. After serving for a time as professor in the University of Leyden, he was forced to resign on account of being a catholic. At once Maria Theresa invited him to Vienna. This was in 1745. He was appointed physician to the Empress, director-general of medicine in Austria, imperial librarian, professor and a baron. He wrote much upon surgery, military medicine, epidemics and other related matters. His death occurred in 1772. Such was one of the liberally educated, representative, old-time physicians who in their immense learning, untiring industry and wide capability stand as a permanent protest to the narrow technical specialized doctor of the present day. As I stood beside the grave of this famous old doctor in the small but elegant church of the Augustins and in the midst of many magnificent monuments and mausoleums, notably the world-renowned one executed by Canova in memory of the Archduchess Maria Christina, I thought of the honors and dignities conferred upon medical men abroad and compared them with those conferred in America. I fear my head drooped a little and I confess my reflections as a member of the American profession, were anything but self-congratulatory. In every great city of Europe, streets are named, statues erected and public monuments consecrated to the memory of eminent medical men. I began wondering whether the fault lay entirely with our peculiar form of government, or we ourselves were not to blame in a very large measure. I wondered if our numerous ill-prepared colleges, our low standards of medical education our senseless desire for cheap notoriety, our tolerance of 'isms and 'pathies, our ofttimes badly-concealed efforts to maintain a professional air with a trade-and-barter method of conduct, and especially our too frequent attacks of professional jealousy and absence of laudable *esprit de corps*, were not after all more in the way of preventing the American people honoring our profession as they should. In the midst of these reflections I strolled sadly out of the church, but took comfort in the thought that the last few years had raised our standard of medical education somewhat and promised better things for the future.

The old university used to be in the vicinity of St. Stephen's church, in a building now occupied by the Academy of Sciences founded in 1846. When it was transferred to its new location it became the center of the educational quarter of the city. The General Hospital, long used for medical teaching, was already there. A short distance beyond were the extensive gardens and superb buildings of the insane asylum for 600 patients. In a neighboring street rose the chemical laboratory, a beautiful renaissance structure designed by Ferstel, while farther along in the same street stood the Josephinum, or Academy of Medicine and Surgery. The latter was founded in 1784 by the Emperor Joseph II. for the training of military surgeons, but afterward he changed his plans. The building to-day contains a remarkable collection of wax preparations illustrating anatomy. In an adjoining edifice, formerly used for the manufacture of implements of war, are the anatomic and physiologic departments. Several military barracks are scattered about the vicinity, while in the midst of them all, occupying the center of a large open platz, rises the magnificent, gothic, highly-ornamented Votivkirche.

The study and practice of medicine in Vienna seems always to have been a matter for the consideration of the state This may be one reason why the standard of medical education there has always been relatively high The religious orders have had more of a voice in all educational matters in Austria, otherwise the educational methods have closely simulated those of Germany It is curious to note that some old statutes of Vienna declare that "medicine is a truly rational science, both as to its theory and its practice" Some modern lawmakers in America, I suspect, do not hold the same opinion! If the applicant for honors were already a master in arts, he was expected to have heard lectures in the medical faculty for at least two years He would then be entitled to the baccalaureate degree, provided he had heard lectures upon Joannicius, Avicenna and some general work of practice, like that of Rasis Almansor If he were a candidate for a licentiateship and were the possessor of a degree he was required to attend lectures on medicine for five years If the authorities found him fit in knowledge and character, devoid of canonical impediments, and *not too effeminate of countenance*, he might receive his degree at the age of 26 but strictly not until he was 28 If princes applied for a degree and were found wanting, they were refused on the ground of the statutes The promotion of licentiates to the doctor's degree was for many years ordered by law to take place in St Stephen's cathedral, where the new doctor was expected to deliver an address in praise of medicine and afterward a lecture upon Avicenna, Hippocrates or Galen In spite of the comparative ignorance of that day, how much more seriously was a medical education regarded than is too often the case now! Given the same governmental control and intelligent support that it enjoyed then, with its modern superiority in knowledge, how much more exalted and effective would be the profession of medicine to day than it actually is!



UNIVERSITY BUILDING, VIENNA

Practical medicine has always had a stronghold in Vienna As early as the seventeenth century the city contained a large number of hospitals Its progressiveness is shown in the fact that the first asylum in central Europe, for the exclusive care of the insane, was established here in 1784 To-day it possesses the largest general hospital in the world and about twenty-four other hospitals, four of which are public institutions, while the rest are more or less private concerns With a population of about 1,100,000, its hospital beds number four and a fraction to every 1,000 inhabitants The oldest hospital in the city was the Borough Hospital of the Holy Spirit, founded by Frederick the Combative in 1240 In 1532 this was removed to the convent of the Clarissa nuns and, like most similar institutions of the time combined the attributes of a hospital and almshouse It continued to be the chief important charitable organization of the city for the next 300 years At one time it sheltered 3,000 souls It was still an important institution in 1754, and was made the seat of a medical school in 1756 The reputation of the medical school had already long vied with that of Bologna, Paris and Padua In 1394 St Mark's Hospital was erected by a private individual, but it was upon two occasions destroyed by the Turks The Emperor Joseph decided in 1780 to abolish the numerous small hospitals throughout the city and to incorporate them into one large establishment This was a wise move on the part of the government, for at the time there were the Crusaders' Hospital built by the Knights of the Order for twelve patients, the Military Hospital previously used as a lazaretto, the Contumazhof, the Bæckerhænsel with its 300 beds for the use of convalescents from the Borough Hospital, the Imperial for the employes of the Court, the Spanish, the Trinity and the Strudel Hospitals In the amalgamation of these various institutions, the monarch appropriated the old workhouse which had been founded nearly a hundred years before by Leopold I., and established beneath its roof the medical school as well as the new hospital. The building had at first been used as a Hôtel des Invalides for retired soldiers and their families. Additions and alterations were made and the whole opened, in 1784, as the General Hospital, or *Allgemeines Krankenhaus*, which has since become world-renowned. For a long time it contained departments for maternity cases, lunatics, foundlings and the sick in general. In 1834 extensive additions were made to the hospital and again in 1862. The maternity cases, the lunatics and the foundlings were separated and placed under a different management in 1860. In 1887 the hospital contained 2,000 beds and treated some 25,796 cases. Surgery has always been an important feature of its work.

A few details in regard to the management of this great and model hospital may be of interest. The government controls it and the same management includes the care of the Royal Rudolph with its 860 beds and the Royal Wieden with its 597 beds. The General Hospital has a director, who draws a salary of 3,800 florins (the florin being equivalent to about 49 cents of our money), and a superintendent. The medical staff is paid by the directors out of the hospital funds and includes five senior physicians and five senior surgeons. Each has three assistants. There are 16 dressers. The senior members of the staff get a salary of 1,800 florins per annum without residence. The nursing staff numbers 226, all of them being lay women except 12 male attendants. The nurses average about 1 to every 10 patients. Their compensation is from 12 to 16 florins per month, with board, washing and uniform. Members of certain religious sisterhoods attend to the nursing in the Rudolph and Wieden. The General Hospital is of course a public charity but it receives three classes of paying patients, namely those who desire the best accommodations at 5 florins per day, those who can give 2 florins, 50 kreutzers per day and finally those who are satisfied with the accommodations afforded for 1 florin, 7 kreutzers per day. Incurable and obstetric cases, as well as children under 4 years of age, are not admitted. The expenses of the institution are met by a Royal Hospitals fund and a reserve fund, both of which are made up from various sources such as interest upon the original capital invested, legal tolls and duties, payments from patients, subscriptions and voluntary donations.

The Allgemeines Krankenhaus covers an area of nearly 25 acres and consists really of a series or conglomeration of hospitals. There is nothing to be said of it architecturally. It is an old-time structure and when I first visited it, toward the latter part of a clear afternoon, I could scarcely believe that I had actually arrived in front of the world-renowned institution. Plain, low and unornamental, it produced in me a feeling of intense disappointment. A photograph of it would scarcely have been worth the trouble of taking. It is an immense rectangular structure surrounding a spacious courtyard and having various irregular, inharmonious wings attached. As I afterward strolled through many of its halls and wards, having been favored with letters of introduction to several members of its staff, I was impressed with the cleanliness and precision with which everything was done in spite of the many inconveniences and ancient construction. Without doubt, it is, except architecturally, a model hospital. Of course were a new building to be erected many improvements would be required for the sake of light, air, ventilation and general cheerfulness. As is the case with many other hospitals in Europe, antiquity must be pleaded as an excuse for shortcomings. Small windows, low corridors, curious old-fashioned doors, rambling halls, musty dark corners, irregular floors, cracked walls and narrow apartments are not entirely uninteresting, for they speak of the past with its suggestiveness of quaint story and feudal history. But in a modern hospital they are not altogether compatible with the modern ideas of surgical requirements and hygienic perfection. The wonder is that in these old hospitals such splendid results are so often attained. It bespeaks unusual attention to details, a systematic exactness and an exceptional skill on the part of the attendants. And after all that may be one of the causes of the supremacy of some of the foreign schools of medicine. The continuous bath for the treatment of skin diseases is a feature in the clinical work of the General Hospital. Besides this hospital mention should be made of the Inquisiten with its 163 beds, the new and attractive Favoriten with its 560 beds and the St. Anne's. Vienna is supplied also with a most excellent Smallpox and Epidemic Hospital, the latter having been erected at the time of the cholera outbreak in 1873 and the first to be constructed in the pavilion style, at a cost of some £39,000. It contains about 300 beds.

HEIDELBERG.

One marvels how a town of only 22,000 inhabitants, and a singularly salubrious town at that, can possibly furnish a sufficient variety of diseases for the maintenance of a school in practical medicine. And yet Heidelberg, known among tourists chiefly for its fine old German castle, its great tun and its duelling students, is one of the most celebrated seats of medical education in all the German empire. It contains a hospital of nearly 400 beds and the medical faculty of its famous university ably maintains the ancient renown of the school. Such distinguished names as Tiedemann, Gegenbaur, Kuhne, Czerny, Erb and Vierordt would add luster to the name of any university. Many a traveler has departed from Heidelberg, after viewing its principal sights and hunting high and low in vain for the university of which he had heard so much, with possibly a feeling of doubt and disappointment as to the veracity of Dame Rumor. To know scholastic Heidelberg one must reside a short time there. The town itself consists chiefly of a single long street, lined on both sides with many an interesting old building, quaint shop, open plaza and curious church, all crowded together as in a vise between the swift flowing Neckar on one side and the wooded Geisberg, with the famous Schloss halfway up its declivity, on the other. Minor streets and byways of course branch off from the main thoroughfare and here and there revive memories of Goethe, Schiller, Martin Luther, Jerome of Prague, Tilly, Gustavus Adolphus and other great names in history, science and romance. Not only is the situation of the town one of the most picturesque in Europe, but its history is one of the most exciting. Scarcely less fascinating, however, is the story of the university, which next to the universities of P[illegible] and Vienna, is the oldest in Germany.

One day as I was saunte[illegible] u[illegible] [illegible]wn h in despair almost relinquished my efforts toward finding the university, I was made aware of the presence of an unusual number of student like fellows hurrying hither and thither in the Ludwigsplatz. I imagined I must at last have arrived in the neighborhood of the school. I looked sharply about me and began getting my letters of introduction ready, but I saw no magnificent edifice anywhere, and so concluded I had again lost the trail. As I was passing through a narrow street, hoping to encounter some one who would revive my hopes by giving me the desired information, I happened to pass a small open doorway in a long, low, insignificant building that did not seem at least to be a private residence. I entered, and what was my astonishment to find, after reading some inscriptions in the vestibule, that at last I was within the walls of the great University of Heidelberg. It came home to me then and there with tremendous force, that buildings do not make universities. Could it be possible, I mentally exclaimed, that the grand old school of Heidelberg occupied no more pretentious structure than this! Truly was it said that the university building is very much like a huge model lodging house in a bad state of repair, being merely a large, plain stucco structure at one side of a bare open platz, appearing as desolate as Gray's Inn Square upon a Sunday. In size and beauty (if, indeed, it may be said to have any) the university is quite eclipsed by its neighbor across the square, the museum. There are no grand open doorways, no Corinthian columns, no majestic peristyle, no towering domes or cupolas, nothing but four flat walls. The anatomic and chemic departments are in another part of the city, and housed in fairly artistic buildings in comparison with the university itself. I would that space allowed me to do more than simply outline the history of this fine old seat of learning, one of whose most important departments is that of medicine, for as I strolled about it and learned more of its life, I grew fonder of it. It was founded in 1386 by Rupert I., purely as an ecclesiastic institution. The Bishop of Worms was its first chancellor, and its faculty consisted entirely of priests and members of the monastic order. Hence it stuck like a leech to the old scholastic doctrines during the troublous times of the Reformation, and always opposed itself to the new learning which later on had its head and source up in the castle. Only in the last century has this favored old school awakened to the progress of the world, and in that short time made itself a reputation for brilliant scientific discoveries. When we recall its stagnant conservatism, what a wealth of sarcasm there is in Pope Urban's bull of 1385, wherein he states that the "town of Heidelberg, which in view of its healthy situation and air and its fertile surroundings, is admirably adapted to form a universal fountain of the sciences." The first statutes of the university were drawn up by Marsilius von Inghen, a former instructor in the University of Paris. The students were required to attend the lectures daily on pain of losing their rights of membership and final certificates. The highest salary paid to any professor was given to Marsilius, and consisted of about £20. The tutors usually received £5 or 50 florins, a pretty handsome sum, I presume, for that day, but scarcely enough for shoe polish in this! Great privileges had this old university. Note some of them for curiosity's sake. All attendants, as well as all who were brought in contact in any way with this "beloved daughter" of Rupert I., such as booksellers, bookbinders and servants of the tutors, were amenable to the jurisdiction of the university only and were exempt from all taxation.

By a commission, the board of the students for one week was to be about three farthings. Three farthings, think of it! The good folk of the village who cared to board any of the students were not required to pay *octroi* or city toll duties. And again, if any of those old Heidelbergers laid violent hands for any purpose whatever upon those precious students, they were obliged to pay a "fine of 60 florins and damages." Every year the magistrates were compelled to take oath that they would not infringe upon the rights of the fondling of Rupert. A pretty mess all these favors soon concocted and as a result *students' wars* and other "great uproars arose" until old Rupert himself had to hasten down the hill and force the town to behave itself. In all sorts of ways the succeeding electors petted and nurtured this spoilt child of theirs and how little did it give in return! Nothing but a lot of theologic truck and a fierce opposition to the advancement of knowledge. At last the electors became tired of all this and one of them, Otho Henry, he who built the charming Heinrichsbau of the castle, "resolved to make the university flourish again even though it should cost him his last farthing." This Henry had vim in him and no scholastic nonsense was able to turn him from his purpose of awakening once more the spirit of intellectual progress. Inviting Melancthon, the companion of Luther, to join him, a quartette was formed, including Henry himself, Melancthon, the councillors Ehem and Propus, to whom was also added the classicist, Micyll, to undertake the remodeling of the school. Success attended their efforts and the ancient scholastic methods were abolished. The library was enlarged and the whole institution placed on a firmer basis. Many famous scholars and teachers occupied its chairs. When Heidelberg was destroyed in 1693 during the war, the university was also burnt. The faculty fled for their lives, but continued their lectures at Frankfort and Weinheim. In 1700 the university was reestablished but during the eighteenth century it was again under the influence of religious conservatism. During the Napoleonic upheavals it received a terrible blow, but in 1803 the Elector of Baden revived it again and placed it on a new foundation, since which time its reputation has steadily increased until now it is one of the noted schools of Europe. The medical department has awakened to new life, and such men as Czerny and Erb and Kuhne have brought it fame. The students of Heidelberg are always proud of their school. To-day they retain many of their privileges, and the easy going burghers are judiciously gracious to them. Dueling is one of the drawbacks, but the abolition of that is under consideration. The merry celebrations, the jovial concourses with rollicking songs and huge tankards of beer, make college life in Heidelberg an episode in one's existence never to be forgotten. Whatever trials he may have passed through, however far he may have wandered, whether high or low be his station in life the old alumnus of Heidelberg recalls with indescribable delight the democratic days of his youth when shoulder to shoulder with emperors' sons, princes and future savants he drank his beer, roved over the neighboring mountains and imbibed the pleasures of knowledge in his dear old alma mater beside the swift-flowing Neckar.

As many American physicians visit Europe, and as medicine is the same there as it is on this side of the water, I thought the limited space at my disposal would probably be more interestingly occupied with these brief notes upon Vienna and Heidelberg than with a description of familiar clinics and technical details

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SELECTIONS

Obstruction of the Bile Duct—At the annual meeting of the New York State Medical Association, Oct 14, 1896, Dr Henry O Marcy of Boston contributed an interesting paper upon the "Surgical Relief of Obstruction of the Common Duct by Biliary Calculi " He gave a review of his special studies upon biliary obstruction, which commenced in 1876 with detailed reports of cases, occuring in 1880 and 1881, where he urgently advised operative procedures for the relief of biliary obstruction Postmortem examination showed that the causes of the obstruction was a biliary calculus lodged in the common duct Operative interference was refused since there was no record of surgical procedures having ever been attempted for this purpose, and the agreement of the consultants that it was probable that the obstruction was in the common duct Autopsy showed that operative interference would have been not only possible, but that the conditions were favorable for surgical interference Dr Marcy performed his first operation in July, 1887, and although unsuccessful in the removal of the gall stone, because of intestinal adhesions, the calculus was dislodged and the patient recovered, followed by a short period of relief Later the autopsy demonstrated that the calculus was in the common duct with a limited range of movement Afterward Dr Marcy criticized his operation, believing that the duct might have been opened and the calculus removed, followed by immediate suture of the wound in the duct, with a reasonable degree of safety Dr Marcy gives a careful detailed history of his first case of successful operation for the removal of a calculus from the common duct which occurred in his private hospital Oct 26, 1889 Here the calculus was imbedded in the common duct so firmly that the backward pressure of the bile through the cystic duct had caused the gall bladder to be so enormously dilated that its contents measured ten ounces Other methods of removal having failed, the gall bladder was divided with scissors through its cystic portion, until the calculus was reached and removed This was nearly globular, about the size of a large filbert, which weighed fifty nine grains when dry The entire wound in the viscus measured four inches It was immediately closed with a fine, continuous tendon suture in three layers, the first including the mucous membrane, the second the entire wall, while the third was taken from side to side as a parallel suture which, when drawn upon, evenly intrafolded the peritoneum over the wound, itself completely buried from sight The abdominal wall was also closed in layers with tendon sutures, without drainage The patient made an easy, uninterrupted recovery and continues well at the time of writing Dr Marcy's first publication upon this subject was read at the meeting of the American Medical Association, held at Nashville in May, 1890 He reports his subsequent experiences as more than satisfactory and gives his fullest approval to the advisability of surgical relief in biliary obstruction caused by a calculus in the common duct Dr Marcy's paper is of the greater importance, since he was the first to attempt the operation, and the first to operate successfully for the removal of a biliary calculus in the common duct Courvoisier, to whom the credit of the first operation has been given by one writer, performed his first operation Jan 22 1890

Malignant Tumors Treated with Toxins of Erysipelas and Bacillus Prodigiosus, Series of 160 Cases—In the *Bulletin of the Johns Hopkins Hospital,* August, appears a discussion of Dr W B Coley's toxin treatment of malignant growths Dr Coley showed that his experience had extended over a period of more than four years, that the tumors sent to him for treatment were for the most part such as had been pronounced inoperable by leading surgeons, and that the diagnosis of malignancy had been determined, in practically all the cases, by a competent microscopic examination

An analysis of the cases treated showed that 48 were round celled sarcoma, 13 spindle celled, 7 melanotic, 2 chondro sarcoma, 3 mixed celled, 14 sarcoma, special type not known Total number of cases of sarcoma 93, carcinoma and epithelioma 62 cases, sarcoma or carcinoma 10, tubercular 2, fibro angioma 1, mycosis fungoides 1, goitre 2, keloid 1 Of the cases of sarcoma, nearly one half showed more or less improvement the variety that showed the greatest improvement was the spindle celled, that which showed the least, the melanotic Next in order of benefit was the mixed celled—round and spindle, then round celled, while osteo sarcoma closely approached the melanotic in showing but little change In a series of nine cases of melanotic sarcoma, no improvement was noticed in six, very slight in three Most of the cases of osteo sarcoma failed to respond to the treatment, many showed slight improvement and one case, a very large osteo chondro sarcoma of the ilium, apparently disappeared and the patient remained well for nearly a year, when a recurrence occurred One case of round celled sarcoma of the neck of very rapid growth showed very marked decrease during the first week's treatment, after which time it continued to grow in spite of large doses of toxins The writer stated that he did not expect the profession at large to accept without question and criticism such remarkable results as he had reported, and for that reason he had related with some detail the successful cases in the hands of other surgeons who had employed this method He was of opinion that a series of upward of twenty successful cases of inoperable sarcoma (four of which had remained well upward of two and a half years), the diagnoses of which had been established beyond question according to accepted methods of diagnosis, ought to be sufficient to demonstrate the real and positive advance that had been made in a field which, up to this time, had been regarded as absolutely hopeless He did not doubt that there were those who would still remain skeptical about the value of the toxins in spite of the evidence presented Such persons must either fail to see any logical connection between the accidental erysipelas and the toxins, or they must go even farther and deny that there are any authentic cases of malignant tumors that were cured by accidental erysipelas The only explanation they can have to offer for the results which can not be questioned is, that in all the successful cases there must have been an error of diagnosis

Remarks by Dr W H Welch "I have been much impressed by this personal statement from Dr Coley, and I see no way of gainsaying the evidence which he has brought forward, that there is something specifically and genuinely curative in his method of treatment A single undoubted cure of a demonstrated cancer or sarcoma by this treatment would be enough to establish the fact that the treatment exerts some specific curative effect, for the spontaneous disappearance of undoubted malignant growths of this character is almost unknown Dr Coley has, however, presented to us positive proof of the cure not of one only, but of several cases of malignant tumor by his method Although I suppose in any given case the chances of cure by this method are at present not great, still the demonstration that cure is possible gives every encouragement for perseverance in this line of investigation and work, and for efforts to perfect the method of treatment It is interesting to learn that the most strikingly beneficial results have been obtained in the treatment of spindle celled sarcomata There are certain kinds of sarcomata which some pathologists are inclined to rank rather among the infectious tumors than among the genuine tumors, in the sense in which these terms are used by Cohnheim, but it is rather certain sarcomata of the lymphoid type than the fusiform celled sarcomata which are thus believed to be possibly outside of the class of genuine tumors, according to Cohnheim's classification. As Dr. Coley suggests that the variations in his results may depend in part upon variations in the virulence of his cultures, and as it is well known that streptococci vary notably in virulence, I would like to ask if he has as yet utilized the methods of Marmorek in order to obtain cultures of uniformly high degrees of virulence. Dr. Livingood in my laboratory has confirmed the results of Marmorek and succeeded repeatedly by his method in transforming streptococci of low virulence into those of very exalted virulence. It seems to me that it would be practicable and most interesting and possibly demonstrative of the specific effects of the treatment, if Dr. Coley in carrying out his researches, would occasionally cut out small bits of tissue from the tumor and by their examination endeavor to determine the details of the process of cure."

In closing the discussion, Dr. Coley stated further:

"About removing specimens during the course of the treatment, as suggested by Dr. Welch, I will say that I have done that in a considerable number of cases. In many of these cases a marked fatty degeneration and necrosis of the malignant cells were clearly visible under the microscope. I shall try to show these changes in micro photographs of the sections. In regard to intra orbital sarcomata, I have not had an opportunity of treating such cases before removal of the eye. I have had four or five cases of recurrent tumors in the orbit after the eye had been enucleated. The effects were very slight, if any. They were all melanotic or round celled sarcomata. As to the safety of the treatment, I think that if the cases are selected with some judgment the injections can be used with almost perfect safety. I have had three cases in which I am sure death was hastened by the use of toxins. In one case I ought not to have used the treatment. There was an enormous sarcoma of the scapula and chest wall. The patient was so much emaciated that he could not have lived more than a couple of weeks, but with two very minute doses of the weaker solution of the toxins he lived only three days."

PRACTICAL NOTES

Rupture of the Liver.—Vanverts reports two cases of rupture of the liver, one fatal from hemorrhage in an hour and a half and the other after twenty four hours. He considers that possibly the latter might have been saved by a prompt laparotomy. In one case the left lobe was almost entirely detached.—*Presse Méd.*, October 7.

Gersuny's Sign for Differentiating Stercoral Tumors.—Gersuny states that if it is difficult to distinguish between a tumor and a hardened mass of fecal matters, certainty can be obtained by compressing the protuberance of the tumor with the ends of the fingers, gradually increasing the pressure until it is very strong, and then gradually diminishing it without removing the fingers. As the mucosa pressed against the stercoral mass sticks to it and is then released by the removal of the fingers it produces a peculiar sensation easy to distinguish, and use as a means of differentiating such a mass from a real tumor.—*Semaine Méd.*, October 7.

Fractures of the Trachea and Larynx.—The Cauvin case recently decided in France calls attention to the fact that the trachea and larynx are very easily fractured, especially in the old, a slight accident or moderate violence is sufficient. A woman of 82 was strangled, and the three first rings of her trachea fractured. A girl of 15 was the other inmate of the house, but she denounced the heir as the murderer, and as it seemed impossible that a young girl could have caused the lesion unaided, the heir was condemned and an appeal to a higher court only confirmed the decision. While he was awaiting removal to the penal colonies, the girl confessed and proved that she had unaided committed the murder.

Creosote Pills for Phthisis.—Romeyer and Testevin recommend the formula below as borne well by the stomach and free from the disagreeable odor of creosote. Creoso magnesol, 10 centigrams, with honey sufficient to make 100 pills. Six or eight to be taken during the day. The creoso magnesol contains 80 per cent. of creosote, and is made by dissolving 20 grams of potassa in 10 grams of distilled water in a porcelain mortar. Eight hundred grams of (beech) creosote are then added and worked into an emulsion, and finally 170 grams of freshly calcined magnesia. The mixture hardens in a few hours, thirty six at most, into the proper consistency for pills; if too hard it can be pulverized in the mortar and mixed into a paste with honey.—*Semaine Méd.*, October 7.

Addison's Disease Cured by Extirpation of one Suprarenal Capsule.—Hadra removed a tumor "the size of a small apple" from a woman of 55, situated directly on the spine, on a level with the stomach. It was causing great pain, dyspnea, night sweats, emaciation and extreme muscular weakness, with edema of the feet. Examination after removal disclosed that it was nothing else than one of the suprarenal capsules affected with tuberculosis, and the complications a case of Addison's disease without the pigmentation, which is not always present.—*Semaine Med.*, October 7.

Cure of Local Cutaneous Tuberculosis by Bier's Congesting Method.—The remarkable fact that persons with mitral insufficiency are so rarely affected with pulmonary tuberculosis, suggested the idea to Bier that tuberculosis of the joints might be benefited by producing artificially a similar sluggishness in the parts affected. The principle is that the bactericidal effect of the blood is more pronounced the longer it is in contact with the bacteria and the more abundant the supply where they are located. Jacoby now proposes to apply it to the early stages of pulmonary tuberculosis by appropriate positions, partial hot baths and massage of the thorax. Woltersdorf describes his experience with it in the *Deutsch. med. Woch.* of October 8. It resulted in absolute cure in his case. He cut his finger during the necropsy of a consumptive in 1892, and local cutaneous tuberculosis developed at the spot, which resisted the usual treatment. He kept postponing the radical measures his friends advised until the leisure time that never came, but two years afterward he became engaged, and according to the German customs he began to wear a betrothal ring. This was worn on the affected finger and caused much pain at first and congestion. He concluded it was a fine opportunity to test Bier's method and was able to announce its success in six months, as the tuberculosis gradually disappeared, until in a year there were no traces of the lesion. He concludes by suggesting its application to lupus faciei by ligating the vena facialis.

Papillo retinitis in Chlorosis.—In a recent number of the *Deutsche Med. Wochenschrift* appears a paper by Diabella on this subject. It describes the case of a female patient aged 21 years, who began to menstruate in her fourteenth year. Her periods came on irregularly, and she developed a certain degree of chlorosis which did not quite disappear in spite of treatment by iron. In the autumn of 1894 she began to suffer from left-sided headaches and was generally out of health, and in the spring of 1895 she developed great weakness again. Menstruation, which had been interrupted, was reestablished and immediately after this there was impairment of vision and later diplopia. On admission to hospital in April there was marked anemia with reduction in corpuscles and hemoglobin, papillo retinitis on both sides and paralysis of the left external rectus. There was a loud hemic murmur. Under treatment with iron and rest in bed there was rapid improvement in the general condition, and by the end of May her color was natural, the murmur could no longer be heard and there was a marked improvement in the state of the blood as regards both corpuscles and hemoglobin. There was also a distinct subsidence of the condition of the optic disc and fundi, and when the patient presented herself again in September these appeared absolutely normal. The author considers that the physical strain and the reëstablishment of menstruation, which preceded the onset of the ocular symptoms in this case, were the means of evoking them in a patient predisposed to disturbance by the long standing chlorosis, in a manner analogous to that in which similar changes are said to take place after severe loss of blood.—London *Lancet*, September 19.

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SATURDAY, NOVEMBER 14, 1896

THE POISONING OF A PEOPLE

In our zeal to prevent the infection of the individual and to protect against epidemic outbreaks in the community we are blind to a pathologic process going on around us of the most stupendous proportion and with the absolute certainty of frightful consequences—the poisoning of the entire race—the slow, sure infiltration of a subtle venom, as discernible by symptoms as the solitary case of a toxic dose of opium or arsenic, or the local scourge of a visitation of cholera or yellow-fever

When the nation was young, the tiny stream of foreign immigration, like a little clouded rivulet adding its scarcely appreciable substance to the broad extent of crystal waters, was swallowed and however muddy its source its particles were soon lost in the multitude of the clean and strong by which it was overwhelmed To-day a thousand sewers are pouring turbulent streams of fetid, pestiferous slime into the once clear sea and already the ceaseless, discolored and unclean inflowing is showing its baneful presence Shall we patiently abide the complete surcharge and then awake to the fact that any remedy is too late?

In an article on "Immigration and Crime," in the *Popular Science Monthly* for September of this year, SIDNEY G FISHER declares that "The criminal influence of the alien with its steady increase can be traced back in our history for the last sixty years ' Our system of foreign immigration, he says, first began to reach serious proportions in 1820, and its effect on manners and morals soon attracted attention The native American party arose some time after 1840 Revelations of pauperism, crime and corruption became more apparent from 1830 to 1850 In those days, "when the foreign population was only one-eighth of the whole, it furnished 2,000 more paupers and 1,000 more criminals than the other seven-eighths Every 32 foreigners produced a pauper and every 154 a criminal, but it required 317 natives to furnish one pauper and 1,619 a criminal" The following table from the census of 1880, based on a ratio to 1,000,000 of population, exhibits the proportion of foreign to native paupers and prisoners at that and the preceding three decades

		1850	1860	1870	1880
Paupers	Native	1,765	1 849	1,635	994
	Foreign	5,986	7,843	4,095	3,438
Prisoners	Native	207	371	733	1,054
	Foreign	1,074	2,161	1,568	1,917

According to the census of 1855 of the State of Massachusetts, which is exceptionally exact in its vital statistics, the foreign born in that State were 21 1 per centum of the whole population, and yet they furnish 44 03 per centum of all the paupers, 40 06 per centum of all the prisoners and 30 87 per centum of all the convicts

The national census of 1890 shows that the native white element of the population is 54 87 per centum of the whole, but it produces only 43 19 per centum of white prisoners and the foreign white element is only 32 93 per centum of the whole, and yet provides 56 81 per centum of the white prisoners It also shows that no small proportion of the murders committed by the natives was due to the example and presence of foreigners

'The foreign born population in this country contributes, directly or indirectly, in the persons of the foreign born or their immediate descendants very nearly three fifths of all paupers supported in alms houses, *although less than half the whole population* it furnishes more than half the paupers" (Census Bulletin No 90)

The fathers of the Republic, Mr FISHER further shows, were entirely opposed to promiscuous wholesale immigration The importation of paupers, vagrants and criminals, together with hundreds of thousands of men and women capable only of cheap manual labor was foreign to their thoughts, or if they contemplated it at all, it was only to revolt against it WASHINGTON wrote "My opinion with respect to immigration is that except of useful mechanics and some particular descriptions of men or professions, there is no need of encouragement while the policy or advantage of its taking place in a body may be much questioned" Again "It is not the policy of this country to employ aliens, where it can well be avoided, either in the civil or military walks of life" And JEFFERSON "They will bring with them the principles of the governments they leave, imbibed in their early youth, or if they are able to throw them off, it will be in exchange for an unbounded licentiousness, passing as is usual from one extreme to another" MADISON, who FISHER says, favored immigration more than any others and introduced the first bill to encourage it, always insisted that he intended to bring over only the *worthy part of mankind*, and said in a letter written in 1813 "It is not the provision of our laws or the practice of the government to give any encouragement to immigrants, unless it be in cases where they may bring with them some special addition to our stock of arts or articles of culture"

Let us note a few symptoms of the morbid inoculation that has been permitted, notwithstanding these patriot words of warning

The professional beggar is becoming as familiar an object in our streets as in his Neapolitan or other European home Deformed children, decrepit crones, and ragged graybeards, crouching on the sidewalks, assail the passer with well-trained wailing voices Want and privation we have always had with us, but the whine of the mendicant trade has only lately been heard and the heart-rending, up-turned face of apparent agony on some hideous body never before seen If tolerated a little longer we may soon expect the revolting spectacles of European cities to be duplicated, as well as the establishments in which infants are mutilated and prepared for street or freak museum display The staple attractions of the illustrated weeklies are "Weary Willies" and "Meandering Mikes," ragged, filthy and loathsome, whose preachings of idleness and thievery are intended to be humorous, but ought to be abhorent The word "tramp" has acquired as recognized a significance as some of the novelties of the medical dictionary

Gallantry toward women has always been the characteristic of the native American, but it is now a daily exhibition on street cars of churlish young men of unmistakable foreign type, with vulgarity stamped all over them, who sit while feeble women old enough to be their mothers cling to over-hanging straps and are swung violently by the swaying of the cars The public conveyances are crowded with coarse, unclean alien laborers, whose first lesson in liberty has been a license to be brutish and insolent The manly suavity of the American mechanic, however uncultivated, marking him as an innate gentleman is fast disappearing before vulgarity and indecency Ignorance, superstition and brutality breed vice, and the readers of the newspapers can not fail to note the prevalence of revolting crimes whose perpetrators have names unpronounceable by Anglo-Saxon tongues

Within a month the great city dailies have published accounts of youthful Fagins, whose rude pictures evidence their race who were organized to teach still younger lads to steal, of Italian girls, who first sacrifice with little compunction their pretense of virtue and then stiletto the recreants who had undone them easily enough, or the rivals who had supplanted them, of Russian rabbis who marry and unmarry their ignorant compatriots in defiance of the law, and of Hungarian brutes who snarl and fight and tear and rend the woman, made wife as the beasts mate, and ruled by blows and kicks and deadly weapons The bright, inquisitive children of reputable households pick up the morning papers as their fathers discard them and read the revolting reports of theft, riot, pillage, murder, rape, incest, adultery and bigamy committed by men and women with strange names To specify instances in detail would exceed our space M M, longshoreman, beat his 7-year-old daughter and dragged her by her hair fifty feet and when arrested claimed she was his child with whom he could do what he pleased, E G, married in Hungary, was divorced by a rabbi, who, when she was arraigned for bigamy, remarried her to her first husband—both woman and rabbi escaping punishment, F L, an Italian blacksmith working in the New York navy-yard, tells his wife to dress in her best to go to Brooklyn after breakfast, "going to Brooklyn" meaning among the low caste (American citizens!) to be taken in a hearse to Calvary Cemetery, for which he prepared by killing her, L N, a boy, kills the younger pupil of his same race for withholding the profits of a petty theft, G F, appropriates a 14-year-old Sicilian girl, whom he sold to another brute, who rented her, at so much an hour, to his friends

The Immigration Investigation Commission appointed by Congress June, 13, 1894, of which Hon HERMAN STUMP of Maryland is chairman, is seeking to exclude paupers How unsuccessfully the revelations of the New York Board of Health show "Squalid quarters, where none of the filthy families speak English"—"a notorious Italian district famous for midnight rows in which the stiletto always plays a prominent part"—"a single tenement running the entire block, with people enough to populate a New England village"—"one roof covering a hundred families, who screech 'no sika baba' in reply to the inspector's inquiry, looking upon him as an emissary of the evil one" In one day the board of health condemned fifty-two rookeries, in which "the filthy conditions shown to exist seemed to preclude the possibility of existence" In two houses in Cherry Street 472 persons were herded in quarters unspeakably wretched There were 702 human beings found in "dingy rear tenements, never penetrated by the light of the sun nor by a puff of fresh air" In a rear tenement on Mulberry Street, for the last five years, there has been a death rate of 75 05 per 1,000, and in other places it has risen at times to 135 5 per 1,000, the average of the city having been 22 per 1,000 As Dr ROGER S TRACY, register of statistics of the board of health declares "Where these high death rates prevail are centers from which contagion can not fail to spread."

Comment on these appalling facts is unnecessary. Intelligent Americans, both native and naturalized, must know that these loathsome dives are dangerous to the entire community. A gentleman riding home on a street car from the Cotton Exchange sacrificed a new suit and scoured himself raw to get rid of the lice a dirty Pole, against whom he had been wedged, literally showered upon him. What sacrifice of clothes or scouring of skin could have rid him of the syphilis, tuberculosis or skin disease he might just as readily have contracted? It is claimed that the heretofore dominant physical traits of the Anglo-Saxon are disappearing under the admixture of alien races. Whether or not this be so, there is danger that both the mental and bodily characteristics of the masses will be affected by the overwhelming influence of excessive unassimilable importations.

PARASITE AND HOST

Can impudence, stupidity and selfishness go farther than in the following "case"? Not long ago a commercial firm enjoying the undisturbed honor of being a parasite upon the medical profession, requested medical men to give without any sort of compensation, their contributions of medical literary articles to the journals published by this lay firm. Sometimes it even went so far as to make the contributor pay for reproducing the illustrations to the article. The very agreeable contributor gave the result of his scientific work to the non-professional publisher in order that the whole profession might learn anything that could aid it in its struggle with disease. The single desire of the physician in contributing to medical journals is to secure the greatest possible professional publicity for his article. What then must be the amused and disgusted contempt of the medical man when he learns that the proprietors of the journal to whom he has given (and even paid for publishing) his article, turn upon him and by virtue of the privilege accorded claim sole proprietary rights, refusing other journals the right to quote from the article, to reproduce illustrations, and refusing the author and giver any power over and any further dissemination of his scientific results by printing! Can contemptibleness be more contemptible?

The excuse offered by this old parasite, to his host, is that he "does not like the business methods" of another and newer parasite. The deliciousness of this excuse is heightened by the fact that the new parasite treats the medical contributor with remarkable liberality and courtesy, and thus threatens the old monopolist, famous for avarice and discourtesy, with some business dangers. The old parasite, which so unmercifully has bled his host in the past, can not think of allowing a more gentlemanly competitor.

But has the medical profession nothing to say about a matter so intimately touching its own rights and duties? Is it not about time that the host awakened to a sense of shame, and that he should revolt against the monopolist parasite which has sucked his juices and strength so long and so uninterruptedly? There were 33,000 copies of the first edition of Quain's Dictionary of Medicine sold, and yet, it is said, the authors and contributors never got a penny of the wealth this book brought the lay publisher. All through the history of American medicine, physicians have supinely, humbly, tremblingly begged the lordly lay publisher to be allowed to present him with their literary labors, even paying for the privilege (at least for the illustrations), and while the publisher grew rich the poor author never got a cent, or at best only a nickel flung him in pity. And the publisher went on gathering his millions!

On top of such indignity now come some of these old monopolists and tell the author of articles presented him that he, the author and the medical profession must not dare to abstract, quote from and reproduce his own article in other periodicals or publications. An instrument or method of operation has been devised, let us say, by a physician, of great value in the saving of human life, the deviser describes and illustrates the same in a lay periodical, giving the periodical the article and paying perhaps for the illustration. This periodical at the highest estimate can not be seen by one-twentieth or one-fortieth of the profession. The author and deviser of course wishes the entire profession to know of his discovery, but the lay publisher, who has been allowed to publish the article first, says "Oh, no! This is my property! My competitor, whose business methods I do not like, must not reproduce this article or illustration for you, you have no rights in it, I must make all the money I can out of it. People must buy my periodical if they want to know about your professional progress. Especially must I keep down more liberal minded rivals!"

Now, with the rivalries and jealousies and business methods of lay publishers, so far as relates to themselves, we as medical men have no care or concern, but when an avaricious publisher seeks in the interest of a narrow commercialism and jealousy to limit the circulation of medical literature, certainly the medical profession must have a word to say. With books, for the material of which a price has been paid the author, the matter is different, but as regards the weekly journals which pay authors nothing for contributions (not even reprints) we wish to protest that the parasite must not dictate to the host. The literature thus given belongs to the author and the medical profession and any such impudence as refusing to permit the use of such literature is a silly impertinence that must be sharply cracked over the knuckles. Whenever such greed makes itself [illegible] m [illegible]l men master their impulse and systematically, weekly even, they return to steal. in order to experience the same fright and intense distress in which they have a morbid delight. The desire becomes irresistible. On analyzing it they, horrified at themselves, experience the need of confiding their state to a friend. In spite of the most bizarre precautions against their penchant they succumb. In some cases suicide then suggests itself. In other cases they find their tendency checked by legal procedures to which they voluntarily give themselves up. To settle even from the standpoint of the patient's welfare itself, the question of punishability is therefore not easy. One woman who bought forty dollars worth at a department store, stole a sponge worth twelve cents. Another woman bought twelve dollars worth and stole a three cent pocket-book for her cook. For this, she a woman in easy circumstances gave the following inventively stupid excuse: 'I have stolen. said she, "because having bought so many things I thought this small return due me. The delusional insane are certainly irresponsible. Their thefts always present characteristic *naïveté* puerility or morbidity.

Lacassagne like Benjamin Franklin thinks "bargain stores a serious social danger to the body politic. Many women who never have stolen and who would never steal elsewhere find themselves there bewitched and excited to take. It is truly a diabolic possession. In the midst of a hurrying crowd, in the odorous overheated. wealth-suggestive atmosphere the woman finds herself with clothing aptly adapted to hide stolen objects. At certain hours there are too few employes to serve the enormous crowd which waits its turn, touching and taking goods whose splendor and variety bewilder.

Certainty of detection would undoubtedly serve as a deterrent in many cases. As Lacassagne remarks it would be better especially for the mentally unstable women, to catch the thief rather than merely to prevent theft.

The 'collector' type is as a rule perfectly responsible. 'Book snatching' is a besetting vice of many bibliomaniacs just as coin and stamp purloining attacks numismatists and philatelists.

While kleptomania in the United States is legally a defence for crime, it remains to be determined in each case whether kleptomania exist and whether it merely extenuate or completely absolve. Where states predisposing to mental instability exist the burden of proof of sanity is on the State. In the 'collectors' the burden would be on the accused. Stealing of relatively worthless articles is by itself no evidence of insanity. Parisians think it 'smart' to steal sugar and matches from restaurants. Not a few sane Americans think it is equally "smart" to steal rides on railroads. Deterrent influences must shows, the chief object of certain women in stealing is to secure the voluptuous titillation that worry and fright over detection gives them. On the other hand certain victims of kleptomania must be held responsible if they persist in going to 'bargain' stores when they have learned the danger of these to their mental stability. There is no need for new legal principles in these cases. The common law properly interpreted is in English-speaking states amply sufficient to protect the rights of the accused and the community.

DIPLOMA MILLS

The *American Medico-Surgical Bulletin* in its latest issue editorially calls attention to a circular of a Milwaukee medical diploma mill that was received by a New York physician. The circular was apparently mailed from Chicago, and the *Bulletin* remarks: "If the Journal of the American Medical Association edited and published at Chicago where the above mentioned circular takes its origin, would start a crusade against this mill in the same fierce spirit that it displays occasionally when it attempts to besmirch certain of its contemporaries it would be elevating itself to the plane where all expect to find it and it would then rise to that high position that should be the chief aim of every scientific medical journal."

It is not the custom of the promoters of irregular and fraudulent schemes to carry on their nefarious practices in their own vicinity, as the editor of the New York publication is probably aware, the diploma mill in Milwaukee uses Chicago for a postal base and New York and other distant portions of the country for the field of its operations. Had the editor of the *Bulletin* read the Journal more carefully he would have seen in the issues of April 25 and June 20 of the present year not only that it had been noticed, but that. owing to that notice, legal proceedings had been instituted in Wisconsin for its suppression. The Journal has not been remiss in the way so obviously hinted. and the insinuation is as uncalled for as is the direct charge that accompanies it. It is satisfactory, however to learn that expectation that requires an absolute reasonableness as a condition of its existence is so high and universal as regards the Journal.

Downright diploma mills can exist only surreptitiously in any part of the country; they have about the same standing as the green-goods manufactories that send out their temptation to crime throughout the rural districts of our country. There is another class of institutions that. while more legal and respectable are only the more dangerous from that fact; they are the ones that, while ostensibly offering a full course of study offer means and inducements for individuals to obtain credentials for entering the under false pretenses That such institutions exist, and that they are recognized as reputable by some State boards is demonstrated, as an article in the last issue of the JOURNAL is evidence It is not always easy to bring home the charges against these, but it is not the intention here to neglect them, or to abate in any degree the efforts for a high standard in our profession

New York has a better medical practice act than many other States and it is reasonable to presume that it is fairly well enforced, but it is possible that the local medical journals could find abuses there that would merit their attention The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is not intended to be at all a local publication, but is published for the whole country and will not knowingly spare existing evils and abuses in any section It will gladly receive any facts that may be known that may aid in its efforts to do its part in bettering existing conditions In acknowledging its indebtedness to the *Medico-Surgical Bulletin* for its rather belated suggestions, it regrets only that it was not offered in a more courteous manner and without the accompaniment of unjust accusations That redoubtable publication will find food for reflection in the petition of the Attorney General of Wisconsin for the abrogation of the charter of the Wisconsin Eclectic Medical College We may also take advantage of this occasion to announce that all circulars of this kind sent to us by members, and they have been numerous have been promptly sent to the State officer named

CORRESPONDENCE

Lay Distrust of the Medical Profession

NEW YORK, Oct 29, 1896

To the Editor —Kindly allow me to make a few comments upon extracts from the editorials in the JOURNAL for Oct 24, 1896

"The lay world, as regards both private individuals and governments is so indifferent to or suspicious of us that while endowments, scholarships, etc , running into the millions exist for the encouragement of the study of languages, astronomy, theology, etc , yet medical education and medical students are left solely to self interest, with almost no endowment to help what is the first necessity of human life—health and the eradication of disease "

It is not difficult to make an analysis of the situation and to arrive at a pretty clear logical deduction in explanation for this attitude of the lay world The trouble lies within our own circle and may be divided into two chief factors

Factor 1 Physicians guard the truth and the right so jealously that they instinctively attack all of their colleagues who are engaged in advancing the profession, because they fear the promulgation of untried doctrines This is the working of a natural law, and it is our only means for preventing the development and spread of false and fanciful theories We know that truth will take the resultant of opposing forces and come to the top The men who are honestly and earnestly engaged in investigating and in lifting the mass of the profession to a higher level are quite willing to submit to attacks if they are working unselfishly and have put aside the vanity of personal feeling The attacking party is usually composed largely of important men who have not given a subject so much attention as investigators have given it, and the lay friends of the attacking party, not comprehending the character of the contest, simply assume that the man who is advancing his profession is a pretty bad character or he would not be attacked In the larger cities where hard headed business men often understand the situation, endowments are coming in regularly for medical educational institutions We can point to some grand examples in New York Millions will be given to the post graduate medical colleges in this country as soon as citizens of wealth and public spirit awaken to a realization of the fact that they can endow great charities and at the same time give the horde of busy physicians who wish to get abreast of the times, opportunities to go back to their homes equipped with newest and best methods for saving life and preventing suffering Some of the paternal European governments give strong impulse and efficient aid to their scientific medical men It is difficult though for laymen and governments to know whom they are to encourage, because of the known importance of men who oppose the views of leaders

Factor 2 Physicians in their ambition to be useful and good are so jealous of any colleague who is outstripping them in good works that they fall into the careless habit of criticizing each other adversely in the presence of laymen without stopping to think of the consequences Seven or eight physicians have perhaps heard of the old sentiment to the effect that "United we stand, divided we fall" but as these seven or eight physicians do not live in the same town they can not profit by this human experience It requires a comprehensive type of mind and much self culture and training to enjoy a constructive appreciation of the excellent work of one's competitors—of prophets in one's own country There are physicians who have won this victory for their better natures, but the great majority fail in such endeavors and they attack a successful man in proportion to his success When I am visiting a new city and wish to see good surgical work done I quietly hunt up the man who is being most abused by his confreres The laity do not know of this trick, and if it is difficult for me to find the man in my own field whom I wish to know, how much more difficult must it be for a layman to get upon the right track

"The opinion of the lay world is made still more plain by the facts of the oceans of patent or secret nostrums eagerly bought and devoured by it, by the long struggle still going on to obtain medical practice legislation to root out quackery, and by the audacity with which it supports medical sectarianism and quackery in the regular profession "

This again is our own fault Elevate the standard of medical education Help the people who are suffering and there will be no need for legislation against quacks and patent medicines It is not quacks and patent medicines that people want It is help for their suffering That is what they are looking for and if the regular profession in any town can not give it they will turn anywhere for relief I would do it myself In the smaller towns members of the regular profession do not derogate the homeopathists a bit more than they do their own best men, carelessly if you please, but nevertheless with the effect of sending the laity over to the homeopathists freely

"The British medical profession during the present century far from occupying a high social status has always been viewed askance by the present Queen and her uncles " This is the fault of the British physicians themselves What a lot of them are tardigradous toadies On more than one occasion when I have been engaged in conversation with some British physician who outranked most members of the nobility in true worth and usefulness, a prince or a duke has come into the room, and instantly my colleague's eyes would assume a distant far away look, and his knees would give way by catalysis I have often felt like killing the poor thing to put him out of his misery He was certain to be taken at his own estimate of his position Men whom I had idealized and placed on pedestals came down within easy reach of me at sight of some prince or duke who was of no earthly account in the progress of the world and who could not even make a decent double shot on grouse I presume that a nobleman instinctively feels like elevating such a toady by employing a method which endangers the integrity of the coccyx of the man who desires elevation

ROBERT T MORRIS, M D

Dermatitis from X Ray

CEDAR RAPIDS, IOWA, Nov 7, 1896

To the Editor —I have noted in the last two numbers of our JOURNAL references to the dermatitis produced by the Roentgen ray Will you allow me to report a case which I know was directly referable to the X ray, as I am the afflicted one myself

Some seven or eight weeks ago I used my wrist in obtaining a successful skiagraph of the wrist joint three or four days in succession The exposure was from ten to fifteen minutes each time and the ray was produced by Tesla's latent coil

About ten days later I noticed a reddening of the skin which grew deeper until it became a purple It was accompanied by great pain, excessive tenderness to the touch, considerable swelling and gave a perfect line of demarkation Finally there was complete desquamation over the surface marked out at the commencement of the inflammation

At this time, some five weeks since, the skin commenced to desquamate I have a lesion about three inches long by two in width The process of repair is very slow The original lesion was about three by four and a half inches

The best treatment I have found is the use of peroxid of hydrogen followed by a simple dressing powder such as aristol or boric acid

I know this lesion was directly caused by the X Ray as my wrist was not subjected to any other substance which could produce an inflammation

Wishing our JOURNAL many years of prosperity, I remain

Respectfully yours,

G C SKINNER, M D

PUBLIC HEALTH

Alcoholism in Children —In addition to its effects in producing criminals, idiots and insane, alcohol arrests the growth Children of alcoholic parents, trained to the early use of liquor, are stunted in their growth, and a French physician is inclined to ascribe to this fact the decrease in the standard of normal height shown by statistics in that country—*Bulletin de l'Académie de Méd* October 13

The Decadent Birth Rate —Maurel considers the chief cause of the decreasing natality to be the high living of the well to do classes, which induces the arthritic tendency with its lowered vitality This is inherited by the offspring, and if they continue in the same mode of life as the parents, the natality diminishes in corresponding ratio, until the family dies out in the course of five generations of overfeeding His ideas are founded on the statistics of his own province and elsewhere, which show that as the consumption of nitrogenous substances increases, the birth rate diminishes —*Bulletin Médical*, October 14

Continues Restriction of Use of Tuberculin —Section 14 of chapter 496 of the Massachusetts Acts of 1895 is amended by act of 1896, extending until June 1 1897, the provision that the use of tuberculin as a diagnostic agent for the detection of the disease known as tuberculosis in domestic animals shall be restricted to cattle brought into the State from points without, and to cattle held in quarantine at Brighton, Watertown and Somerville, except when the owner or person in possession consents in writing thereto, or a competent veterinarian, upon physical examination, condemns the animals as tuberculous

To Report Accidents from Gas or Electricity —Chapter 338 of the Massachusets acts of 1896 provides that the chief of police in any city or town and the medical examiner in any district in which a person, corporation or municipality is engaged in the business of manufacturing and selling gas or electricity for lighting or for fuel, shall make a written report to the board of gas and electric light commissioners of every accident caused by the gas or electricity manufactured or supplied by such person, corporation or municipality, whereby any person shall suffer bodily injury or loss of life or be rendered insensible, stating the time, place and circumstances of the accident Such report shall be made by the chief of police within twenty four hours and by the medical examiner within seven days after notice of said accident

Can Require Removal of Dead Animals —A city may by ordinance lawfully prescribe that unless the owner of a dead animal, even though the carcass be of some value, shall remove it, or cause it to be removed, beyond the city limits, within a specified reasonable time, and to a specified reasonable distance, the municipal authorities may deal with such carcass as a nuisance, and as such take charge of it, and make such disposition thereof as will best conserve the public health So holds the supreme court of Georgia, in the case of Schoen v City of Atlanta, decided Feb 7, 1896 It is not, however, the court goes on to state, lawful to require that such owner, upon removing the carcass, or causing its removal, within the time allowed him for this purpose, shall deposit it beyond the city limits at such place only as may be designated by the municipal authorities, or that upon his refusing so to do the city will have it removed at his expense to that particular place, provided the removal intended by the owner contemplates the deposit of the carcass at some other place outside of the city not itself within a prohibited distance from the city line, and such disposition of it, when so deposited, as will in any event prevent its becoming a nuisance to, or otherwise injuring, any of the inhabitants of the city

To Protect Health in Ohio —Among the laws passed at the recent session of the Ohio legislature having the preservation of the public health in view, is one which provides that no dwelling or building, or any room or apartment of itself, in or connected with any tenement or dwelling or other building, shall be used, except by the immediate members of the family living therein, for carrying on any process of making any kind of wearing apparel or for the manufacture of cigars, cigarettes or tobacco goods in any form, when to be supplied to others for sale, unless such place be regarded as a workshop and made to conform to the requirements of having direct outside entrance, no opening into any living or sleeping room, sufficient light, heat and ventilation, proper water closets for each sex, and be kept in a cleanly condition Another act deals with the manufacture of flour and meal food products It restricts the hours of labor of employes in bakery or confectionery, prescribes as to storage of manufactured products, arrangements as to wash room, water and earth closets, drainage, plumbing, ventilation, height of walls, furniture and utensils, sleeping places, and declares that "no domestic animals, except cats, shall be allowed to remain in a room used as a biscuit, bread or cake bakery, or for the storage of floor and meal products" March 30, 1896, a new and somewhat lengthy law was passed to prevent the adulteration of vinegar Finally, a supplement to section 6928 of the Revised Statutes of Ohio makes it a penal offense against the public health to feed to swine or animals of any kind used for human food the flesh of any old horse, or the flesh of any animal which has become old, decrepit, infirm or sick, or of one that has died from such cause, or any offal or flesh that is putrid or unwholesome

Boards of Health to Enforce Massachusetts Bakery Law—A law was passed in Massachusetts, approved May 19, 1896, which provided, under penalty, that all buildings occupied as biscuit, bread or cake bakeries shall be so drained and shall be provided with such a system of plumbing as shall conduce to the proper and healthful condition thereof Every room used for the manufacture of flour or meal food products shall have, if deemed necessary by the proper board of health, an impermeable floor constructed of cement or of tiles laid in cement, with an additional flooring of wood properly saturated with linseed oil The side walls and ceilings of such rooms shall be plastered or wainscoted, and, if required, by said board, shall be whitewashed at least once in three months The furniture and utensils in such rooms shall be so arranged that the furniture and floor may at all times be kept clear and in a proper and healthful sanitary condition The manufactured flour or meal food products shall be kept in perfectly dry and airy rooms, so arranged that the floors, shelves and all other facilities for storing the same can be easily and perfectly cleaned Every such bakery shall be provided with a proper washroom and water closet or closets, with ventilation apart from the bakeroom or rooms where the manufacturing of such products is conducted, and no water closet, earth closet or closets, privy or ash pit shall be within or communicate directly with the bake room of any bakery The sleeping places for the persons employed in a bakery shall be separate from the room or rooms where flour or meal food products are manufactured or stored The board of health of a city or town in which a bakery is situated, or in which the business regulated by this act is carried on, shall enforce the provisions of the act, and shall cause copies of the same to be printed and posted in all the bakeries and places in which such business is carried on within their respective jurisdictions

BOOK NOTICES

A Treatise on Obstetrics for Students and Practitioners—By EDWARD P DAVIS, A M, M D Illustrated with 217 engravings and 30 plates in colors and monochrome, cloth, pages 553 Philadelphia and New York Lea Bros & Co, 1896

The practice of obstetrics has changed materially with the introduction of bacteriology Aseptic midwifery is now the rule, and naturally all the treatises on obstetrics have to be rewritten from that standpoint, and thus the parturient woman of to day escapes many of the accidents which were so common twenty five years ago The work includes chapters on obstetric diagnosis, differential diagnosis of pregnancy, the diagnosis of advanced pregnancy, the complete examination of the pregnant patient, the origin and growth of the ovum and the development of the embryo, the physiology of pregnancy, the pathology of pregnancy, normal labor and its management, labor resulting in the impaction of the fetus (impossible labor), multiple pregnancy, induction of labor, abnormal labor pains, hemorrhage before labor—concealed hemorrhage—placenta previa, eclampsia, sudden death during labor, labor complicated by disproportion between pelvis and fetus, labor in enlarged pelves, (justo major), labor and contracted pelves (justo minor), rachitic, flat, labor in rare varieties of deformed pelves, labor complicated by tumors of the pelvis and genital organs, septic infection, episiotomy, multiple incisions of the cervix, suture of tears of the perineum and of pelvic floor, the forceps, version and extraction, symphysiotomy, celiohysterotomy (Cæsarean section) celio hysterectomy, including Porro's operation, embryotomy, obstetric curettement, emptying of the uterus, abortion and premature labor, extrauterine pregnancy, the puerperal state and its complications, the repair of lacerations of cervix caused by labor, the repair of injuries to the pelvic floor and perineum, insanity and nervous disorders accompanying the puerperal state, lactation, normal infancy the pathology of the fetus injuries at birth, asphyxia, diseases of early infancy, incubation and artificial feeding, fetal abnormalities in size and form, monstrosities, diseases of infancy including acute dyspepsia and enteritis, dentition, the respiratory disorders of infancy disorders of development in infancy, and tuberculosis The jurisprudence of obstetrics include legitimacy of birth, infanticide, abortion, evidence of pregnancy in tedious child birth, and the legal aspects of obstetric practice

This is a carefully written book on the science and art of obstetrics and is thoroughly up to date It is destined to become a favorite

Diseases of the Eye A Hand book of Ophthalmic Practice for Students and Practitioners By G E DE SCHWEINITZ A M M D, Professor of Ophthalmology in the Jefferson Medical College, etc With 256 illustrations and two chromo lithographic plates Second edition, thoroughly revised Philadelphia W B Saunders 1896

With his well known thoroughness the author has added a great deal of interesting new matter compiled from the recent literature, in order to keep the text book abreast with the rapid progress of ophthalmic science It will, therefore, deservedly continue to be a favorite guide book among students and practitioners But we are unable to understand how the keen eyed scrutiny of the author could overlook a most unfortunate blunder which has crept into the chapter on the paralysis of the ocular muscles Three illustrations are given a wrong signature and place, the illustration said to show the position of the double images in paralysis of the superior rectus, in reality represents the diplopia in paralysis of the superior oblique, while the illustration of the double images in paralysis of the superior oblique is really a representation of the diplopia in paralysis of the superior rectus, and the illustration of the double images in paralysis of the inferior rectus gives the position of the double images in paralysis of the superior rectus These are very awkward mistakes, for even with the correct illustrations the students generally find it pretty difficult to get a clear understanding of the subject from the way in which the different forms of diplopia in paralysis of the ocular muscles are usually described in the text books but surely they will be dazed and thoroughly bewildered if the illustrations do not agree with the descriptions

The publishers should at once try to rectify these blunders of the press room by inserting into all unsold copies an extra leaf correcting these errors, which mar an otherwise so excellent text book

Since writing the above we have been informed that the mistakes have been rectified in those books already bound by inserting an errata slip, and in those not yet bound by reprinting the pages and putting the cuts in their proper places The publishers also have sent the errata slips to everybody who has purchased one of the books in which the mistakes occurred, so far as they were able to ascertain this

Skiascopy and its Practical Application to the Study of Refraction—By EDWARD JACKSON, A M, M D, Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc Second edition, with twenty seven illustrations Philadelphia The Edwards and Docker Co 1896

The quick sale of the first edition is the strongest indorsement of the favorable opinion we expressed on the merits of this little book one year ago There are no material changes in the second edition, but we are pleased to note in several places slight changes in the phraseology, by which the author's ideas are expressed with greater precision and the possibility of a misinterpretation is obviated

Charaka Samhita Translated into English Published by AVINASH CHANDRA KAVIRATNA Calcutta Printed by Girish Chandra Chakravarti (200 Cornwallis Street) Part XV

We have before mentioned this venerable treatise, interesting not only because of its great antiquity, but to the medical historian as showing much of the ancient knowledge that is still current

This fasciculus begins the division on Virnānam The object of the Virnānam is to help the physician to acquire a knowledge of the tastes The various tastes are enumerated, and Hindu dietetics is discussed as then understood "Lesson III" in this fasciculus treats of "how the destruction of cities and towns and villages are brought about"

In the matter of gastronomy The Charaka Samhita says

'It (food) should also consist of such ingredients as would not form a combination of hostile potencies"

"One should take one's food in a place that is agreeable"

"The food one takes should, again, consist of dishes every one of which is agreeable One should not eat with haste, or taking up a long time, or talking or laughing the while"

"While eating one should eat with attention concentrated thereon"

"Lastly, one should eat after a proper survey of oneself" (that is, attention to one's state of general health)

In regard to plagues the book says

"In the capital known as Kāmpilya, situated in the region called Panchāla that teemed with clusters of villages, and that was inhabited by many foremost of regenerate persons, the illustrious Punarvasu, the Son of Atri, surrounded by disciples, toward the close of the month of sweat (gharme māse), while engaged in a walk in the woods on the banks of the Ganga addressed his disciple Agniveca, and said 'Verily, O amiable one, of the constellations, the planets, the moon, the un, the atmosphere and fire, as also of the points of the ompass, as existing in their natural state, conditions are bservable causing perverse symptoms of season From this, ery soon, the soil also will not duly impart unto the herbs uice, energy, assimilable virtue and potency Through bsence of these an epidemic outbreak is certain to follow'" Then follows a discussion of the etiology of epidemics, and it is seen that bad water occupies the first place

Truly the world has changed little from the days of the Son of Atri, when the Sanskrit Vedas were the songs of the people not less than those of the priests

Over the Hookah The Tales of a Talkative Doctor By G FRANK LYDSTON, M D Illustrated Chicago Fred Klein Company 1896

Dr Lydston's reputation as a good story teller will be increased by the publication of this book, and those who have had the pleasure of hearing him tell a story will like the book all the better after having had that pleasure, for after all, a large part of the pleasure and charm of story telling lies in the voice and manner of the narrator Particularly is this true of dialect stories, where the skill of the linguist is shown not only in construction, but in orthoepy and accent However, next to hearing Dr Lydston tell a story, comes the pleasure of reading one that he has written or adapted, for his adaptations have a personal flavor about them that gives originality

The hookah, be it known, is an Arabic pipe, consisting of a box in which tobacco burns, a vessel of water through which the smoke passes, and a long pliant stem or mouth tube When the Doctor lit his hookah, the stories began

As a rule, the author defends the profession throughout, but there are many sarcastic passages, and one might almost believe, severe hits at foibles belonging exclusively to certain well known members of the profession When the author's "Dr Weymouth' is fairly launched on this subject he is very candid, sometimes caustic, but he is never dull

The stories in the book are all character stories, and truthfully drawn One that is absolutely new, is that of Major Meriwether, a curious compound of fuss and feathers, poverty and pride, bombast and braggadocio, egotism and simplicity, good nature and cowardice Dr Lydston has made a very readable book, and if some of the stories of the frontier are rugged, it is because they are true to the characters of the mining camp, and to the rugged environment of the men themselves

A Text book of Special Pathologic Anatomy By ERNST ZIEGLER, Professor of Pathology in the University of Freiburg Translated and edited from the eighth German edition by Donald MacAlister, M A, M D, and Henry W Cattell, A M, M D Sections 1 to 8 New York and London The Macmillan Co 1896

This is the third English edition of Ziegler, the first of which was published in 1884, but the great advances which have been made in pathology have been embodied in five German editions that have appeared in the meantime So in this work the text has been recast to correspond to the latest German edition The second volume, which will contain sections on the alimentary tract, liver and pancreas, respiratory and genito urinary systems, the eye and ear, is in press and will shortly be published, after which it will be followed by a new translation of the part on general pathologic anatomy This volume contains eight sections, as follows 1, blood and lymph, 2, the vascular mechanism, 3, the spleen and the lymph glands, 4, the osseous system, 5, the muscles and tendons, 6, the central nervous system, 7, the peripheral nervous system, and 8, the skin

There are 308 illustrations in this volume The illustrations are of the style and appearance of those in Hamilton's Pathology This work is very thorough and complete The bibliography alone at the end of each of the paragraphs is worth to any student, writer, or other person interested in the subject, the price of the volume The book is greatly condensed, there being no redundancy of matter or in the style of expression It deserves wide publicity and doubtless will receive that generous support which has been accredited to former editions

An American Text Book of Physiology By HENRY P BOWDITCH, JOHN G CURTIS, HENRY H DONALDSON, W H HOWELL, FREDERICK S LEE, WARREN P LOMBARD, GRAHAM LUSK, W T PORTER, EDWARD T REICHERT and HENRY SEWALL Edited by WM H HOWELL, Ph D, M D Illustrated, 1052 pages, royal octavo Philadelphia W B Saunders, and Chicago, W T Keener, Agt Price (cloth) $6

This book is published in the same general style and size as the text book on obstetrics It is on the collaboration method and has the natural disadvantage of the overlapping, but it undoubtedly gives a broader view than single authorship Such works, however, can not fail to be detrimental in the long run to the interests of individual authorship, as each school represented in the book forces the book on the students of the college, consequently there is a taste of commercialism about all books written on this basis that is objectionable We have heretofore refrained from touching on this topic, but believe the time has come for doing so, as however great the merits of the book, it is not in accordance with that freedom and liberty of action on the part of our teaching faculties that should exist in this country This does not apply alone to the book under consideration, but refers to all works of its kind This text-book is one of the most satisfactory of the series It is highly scientific and free from padding, and has embodied in it the latest observations on the subject The contents are as follows Introduction by the editor, Dr Howell, general physiology of muscle and nerve, secretion, chemistry of digestion and nutrition, movements of the alimentary canal, bladder and ureter, blood and lymph, circulation, respiration, animal heat, central nervous system, special senses, physiology of special muscular mechanisms, reproductions chemistry of the animal body

A System of Diseases of the Eye By American, British, Dutch, German and Spanish authors Edited by Wm F Norris, A M, M D, Charles A Oliver, A M, M D, Vol I Embryology, Anatomy and Physiology of the Eye, with 23 full page plates and 362 text illustrations Philadelphia J B Lippincott Co 1897

This is the first volume of a system of diseases of the eye written in the English language, and embraces the most advanced theoretical and practical views on the subject The broad pages and large type make it a pleasure to the eye, while the beautiful illustrations are creditable alike to the author and the publishers This is intended to be an encyclopedia on the subject of diseases of the eye and will be of service not only to ophthalmologists and special students, but for reference by the general practitioner as well We notice with pleasure that the subjects of dioptrics, perception of light, binocular vision, have been given to Americans It is well known that in these subjects our countrymen have taken the lead We notice the death of Dr Rider, who wrote the chapter on the embryology of the eye and who died before the issue of the volume Professor Dwight of Harvard College has contributed an exhaustive chapter on the anatomy of the orbit and appendages of the eye, while Dr Frank Baker of the University of Georgetown has a very scholarly article on the anatomy of the eyeball We congratulate the editors and the publishers on the production of the first volume, and we believe that it will take its place at the very head of the extended works on this subject in English

Water and Water Supplies By John C Thresh London Rebman Publishing Co W B Saunders, Philadelphia, and W T Keener, Chicago, Agents Price $2 25 net

In this day, when the question of water supplies is interesting health officers everywhere and the public generally, this book will be peculiarly timely and interesting Its scope includes discussion of water, its composition, properties, rain and rain water, surface water, subsoil water, natural spring water, deep well water, river water, quality of drinking water, waters, impure water and its effect upon the health, the interpretation of water analyses, the pollution of drinking water, the self purification of rivers, purification of water on a large scale, domestic purification, the softening of hard water, quantity of water required for domestic and other purposes, selection of sources of water supply, wells and their construction, pumps and pumping machinery, the storage of water, the distribution of water, the law relating to water supplies, rural and village water supplies, with an appendix

The book will be found interesting and it is adapted to both popular and scientific reading It is accurate in its statements and will be generally accepted by those interested as authoritative For students and those preparing for examinations as medical officers of health we commend the book

Text book of Training Schools for Nurses, Including Physiology and Hygiene and the Principles and Practice of Nursing By P M Wise, M.D , with an introduction by Dr Edward Cowles, in two volumes, Vol II New York and London G P Putnam & Sons 1896

In our notice of the first volume of this book we took occasion to commend it as being the best and most systematic text-book that has fallen under our observation, and we can only repeat the statement in glancing over the second volume, which is divided in thirty chapters, and contains thirty eight illustrations The chapters are as follows 1, local applications, poultices, fomentations, 2, counterirritants, cupping, leeches, 3, enemata, suppositories, 4 and 5, bandages and bandaging, splints, 6, fractures, dislocations and sprains, 7, fever, inflammation, 8, hemorrhage, 9, wounds, burns and scalds, emergencies 10, anesthesia and anesthetics, 11, surgical nursing operation 12, poisons, bites, stings, etc , 13, asphyxia, artificial respiration, 14, convulsions, apoplexy, coma, syncope, etc 15, nervous disorders, 16, insanity 17, forms of insanity, 18, observations on care of the insane in the household, 19, duties of hospital nurses for the insane, 20, baths and bathing, 21, massage, 22, medicines and their administration, 23, forcible feeding, food for the sick, 24, special medical cases, 25, children's diseases, 26, convalescence, signs of death, care of the dead, 27, Pregnancy, physiologic signs and symptoms of abortion, miscarriage, 28, preparation for labor, necessity for antiseptic care, parturition, etc , etc , 29, care of the infant, and 30, gynecologic nursing

In the appendix will be found a glossary of technical words and phrases and general index to the two volumes The whole, as we have stated, form at present one of the best text books of training schools for nurses that is on the market, in our judgment

Text book of Histology, Descriptive and Practical for the use of Students By Arthur Clarkson, M D , C M , Edinburgh, with 174 original colored illustrations Philadelphia W B Saunders, 1896 W T Keener, Chicago, agt Price, $6 00 net

This is the English imprint of the work as issued in Edinburgh, and notwithstanding the author asserts that the book being of limited size can not aspire to be of the nature of an exhaustive treatise on histology, yet it will be seen that the field is thoroughly covered, and that the work has been well done Scotch pathologists and histologists seem to predominate among the English medical books, and it must be confessed that they have taken a high place For students and practitioners, desiring to refresh themselves with histologic work, the book of Clarkson will be found to be a trustworthy and very satisfactory guide Mr Saunders has done well to introduce it to the American public

ASSOCIATION NEWS

Rush Monument Committee —The following subscriptions to the Rush Monument Fund have been received

April 17, Dr J W Hoff, Pomeroy, Ohio	$ 5 00
April 17, Dr T J Acker, Croton on Hudson, N Y	5 00
April 30, Peoria City Medical Society (through Dr O B Will), Peoria, Ill	25 00
April 30, Dr D W Cathell, Baltimore, Md	1 00
April 30, Dr W T Cathell, Baltimore, Md	1 00
May 9, Dr J P Getler and others, Mifflin County, Pennsylvania	3 00
May 21, Dr E H Bishop, Towson, Md	1 00
June 10, Dr C B Burr, Flint, Mich	10,00
June 29, Dr W H Hardin, Anderson C H , S C	1 00
June 29, Herkimer County Medical Society (through Dr G Graves, Herkimer, N Y)	25 00
Sept 30, Dr J W Grosvenor, Buffalo, N Y	1 00
Sept 30, Interest to date	81 00
	$ 159 00
Before reported	3,727 39
Total	$3,886 39

George H Rohe, M D , Secretary

NECROLOGY

James Bissett Murdoch, M D , of Pittsburg, late dean of the Western Pennsylvania Medical College, died October 29 He was a son of the Rev David Murdoch, D D , late of Elmira, N Y , and was born in Glasgow, Scotland, Oct 16, 1830 He was graduated from the New York College of Physicians and Surgeons in 1854, and during the ensuing year was house surgeon to Bellevue Hospital Subsequently he became surgeon of the steamer *North Star* of the Vanderbilt line From 1855 to 1872 he practiced at Elmira, N Y , and since that time he has been established at Pittsburg He was member of the Oswego County Medical Society, its president in 1865, of the New York State Medical Society, of the Allegheny County Medical Society, of the Pittsburg Academy of Medicine and School of Anatomy, president of this society in 1877, of the Pennsylvania State Medical Society, its president in 1888, and of the American Medical Association During the war he served three years in the Twenty fourth New York Volunteers and was surgeon in chief of his brigade He was a member of the Grand Army and Military Order of the Loyal Legion, a trustee of the Pennsylvania College for Women and a director of the Monongahela Navigation Company He was a frequent contributor to the various medical journals and many of his writings have appeared from time to time in this Journal He leaves three sons and two daughters

Moritz Schiff, M D, one of the leaders in experimental physiology, which owes many discoveries to him Professor of Physiology at the new University of Geneva and previously at Berne and Florence He was born at Frankfurt-on the Main in 1823 Author of many works on his specialty, the best known are perhaps his "Physiology of the Nervous System," "Investigation of the Spinal Cord," and the "Influence of the Nervous System in the Production of Diabetes"

MISCELLANY

Trained Nurses in the Paris Hospitals—There are about 1,800 graduated nurses and attendants in the public hospitals of Paris, but the remainder amounting to 3,459, have never received special professional training

Two New Buildings for the Feeble minded—By resolution of the Massachusetts legislature there is to be allowed and paid out of the State treasury a sum not exceeding $60,000, to be expended at the Massachusetts School for the Feeble minded at Waltham, under the direction of the trustees of said institution, for the purpose of erecting two new buildings, in accordance with the recommendations contained in the forty eighth annual report of such trustees

Authorizes Holding More Property—Any corporation hertofore chartered by the legislature of Massachusetts for any of the purposes mentioned in section 2 of chapter 115 of the Public Statutes, which includes associations formed for any educational, charitable or benevolent purpose, or for the prosecution of any scientific or medical purpose, it was enacted at the recent session of the legislature of that State, may hold real and personal estate to the amount of not more than $500,000 for the purposes set forth in its charter

Massachusetts Pharmacy Law Codified—Chapter 397 of the Massachusetts Acts of 1896, entitled "An act to regulate the practice of pharmacy," approved May 15, 1896, is a codification and consolidation of the laws of that State relating to the regulation of the practice of pharmacy and of all the laws which it is the duty of the board of registration in pharmacy to enforce, which were previously scattered through half a dozen or so different volumes

Sphacelotoxin, the Active Principle of Ergot—Jacoby of Strassburg announces that he has succeeded in isolating the active principle of ergot It forms a yellow crystalizing substance, chemically pure, which produces abortion in dogs and cats in twenty four hours, without severe general symptoms It also decreases the laying of eggs by hens No poisonous effect is produced on warm blooded animals even in very large doses—*Wien Klin Rundschau*, October 18

Impotence in Law—Under the Illinois statute which provides that where a marriage has been contracted, and it shall be adjudged, in manner prescribed, that either party, at the time of such marriage, was and continues to be naturally impotent, the injured party may obtain a divorce, the supreme court of Illinois holds, in the case of Griffith v Griffith, where it denied a re hearing Oct 9, 1896, that where the defect in the husband proceeds from self abuse, if he will not exercise a moral restraint over himself, and test the curability of his disorder by proper self control, his wife has a right of action on the ground of impotence The words "naturally impotent," as used in the statute, the court holds, means "incurably impotent," and that it is immaterial whether the impotence existed at birth and by some formation or nonformation of nature, or was caused by the party's own fault, so long as it exists at the date of the marriage

The History of Surgery in Tableaux—At the twenty fifth meeting of the German Surgical Society, lately held, after the reading of many highly meritorious papers by the most eminent surgeons, an entertainment was given, at which the Emperor and Empress were present It consisted of a series of tableaux which represented the history of surgery The first represented the battle of Teutobruger Wald, showing how the place looked when the soldiers' wounds were dressed on the battlefield Then came the monk, the quack and the barbers as healers, and so on, following the course of surgery down to to day, and the final picture was in honor of the Red Cross

Alleged Wrong 'Flexion—In an action to recover from a rail road company for personal injuries, which it was alleged, resulted in a retroflexion of the womb, while the proof established an anteflexion, the defendant argued that a verdict should have been directed for it, on account of this variance But the court of appeals of Indian Territory holds otherwise, case of Missouri, K & T R'y Co v Turley, decided Sept. 9, 1896, saying that the company having offered no proof that it was misled, the alleged variance, if, indeed, it could be so termed, must be regarded as harmless, and treated as immaterial

Non Expert Evidence of Insanity in New Mexico—The supreme court of New Mexico holds, in the homicide case of Territory v Padilla, decided Sept 1, 1896, that it was competent for a non expert to testify that the demeanor of a witness, whose sanity was attacked, was similar, as nearly as he could remember, at the coroner's inquest and before the jury in the trial in the district court, and that he was considered by him a very stupid witness, and uncertain as to the facts he stated, that non expert witnesses can be asked as to conduct and appearance, but that they can not give an opinion as to the sanity or insanity of a person, and can not testify as to what is his general reputation as to sanity At the same time, two of the justices dissent from the doctrine that a non expert may not state his opinion or conclusion as to the sanity or insanity of a person whose mental soundness or capacity is under consideration

Restrictions upon Evidence of Attending Physicians—The court of appeals of New York holds, in the case of Redmond v Industrial Benefit Association, decided Oct 6, 1896, where an insurance company's by laws required the proofs of death to contain, among other things, a statement, under oath, of the attending physician, made upon a blank furnished by the company, and such statement showed that he had treated the insured for renal calculi some months prior to the time application was made for the insurance, that it was evidence, but not conclusive evidence, of disease of the urinary organs when the application was made, or within five years prior thereto It also holds that the testimony of the physician to prove this fact at the trial of the action against the insurance company was properly excluded under section 834 of the Civil Code, as privileged

Not Hearsay Evidence—The supreme court of Georgia holds, in the case of the Western & Atlantic Railroad Co v Stafford, decided July 27, 1896, that there was no error in allowing a physician to testify that one who had received violent personal injuries, and who was under treatment in a boarding house on the day upon which he was hurt, did not know he had previously, on the same day, after receiving the injuries, been in the physician's office The objection to this testimony was that it was simply the sayings of the plaintiff, who was seeking to recover for his injuries, made some five hours after the occurrence and too far off to be a part of the occurrence But the court takes the above view, it not appearing on cross examination or otherwise, that the physician's knowledge on the subject was not derived from personal observation of the patient's condition, or that it depended solely upon statements made by the latter

Esophageal Sac or "Antrum Cardiacum"—Fleiner, Boas and Ewald have observed in a few cases a cavity above the stomach in the alimentary canal One patient could only swallow his food by filling the esophagus to the top, and then by pressure from the outside force the contents down into the stomach Others have required the permanent use of the sound If the stomach is filled with melted wax after dissection, it often reveals the presence of an ante stomach, with no evidence of a previous cicatrization The symptoms in the case of an 8 year old child were distress in breathing, pain in the gastric region, vomiting, regurgitation and eructation after or during meals, with a peculiar cough at night and a gurgling sound in the chest The child masticated slowly, ate very little, and was much emaciated Alimentation with the sound caused it to gain five pounds in ten days Investigation with the sound disclosed a cavity above the stomach that contained 70 c m fluid The trouble in this case is congenital and will probably require the continual use of the sound for life —*Wiener Klin Rundschau*, October 27

Examination and Evidence in Personal Injury Case—The supreme court of Georgia says that it will not reverse the action of a trial judge in refusing, pending the trial of a suit for personal injuries, to order a medical examination of the plaintiff, when it appears that no request for such on examination was made of the plaintiff before the trial began, and no request to this effect was made to the court until after the plaintiff's evidence had been closed and it was then impracticable, without too long a suspension of the trial, to obtain a satisfactory and competent physician by whom an impartial examination could be then made While the power to order such an examination exists, it goes on to state that it is in each case to be exercised or not, according to the sound discretion of the presiding judge And the court also holds, Savannah, F & W Ry Co v Wainwright, decided July 20, 1896, that while a husband is not competent to testify as to oral complaints made to him by his wife concerning her "pains and hurts" resulting from a physical injury, he may testify as to the physical condition of any of her members of which he had actual knowledge and, if such condition manifestly caused suffering, he may so state

Colorado Inebriate Law Constitutional—The supreme court of Colorado holds, "In re House," a case decided June 29, 1896, that chapter 74 of the State session laws of 1895, which provides for the sending of indigent habitual drunkards to an institution for treatment at county expense is constitutional, thus reversing the decision of the county court Among the chief objections raised was that it offended against a provision of the State constitution that "No appropriation shall be made for charitable, industrial, educational or benevolent purposes, to any person, corporation or community not under the absolute control of the State, nor to any denominational or sectarian institution or association" as well as that it offended against a provision that "The general assembly shall not delegate to any special commission, private corporation or association, any power to make, supervise or interfere with any municipal improvements, money, property or effects, whether held in trust or otherwise, or to levy taxes, or perform any municipal function whatever" But after carefully considering these, and other constitutional objections, which it says were ably and exhaustively urged, the supreme court declares that, while the act may in some respects be defective, and subject to some criticism, it is not objectionable to any of the constitutional objections urged, and must be upheld as a legitimate exercise of legislative power

The Demand and Supply of Eunuchs in China—A writer in the London *Lancet* gives us some information upon the above subject In China the Emperor and certain members of the royal family are alone entitled to keep eunuchs His majesty maintains at least 3,000, but no prince of the blood or imperial princess has a right to more than thirty Theoretically the palace eunuchs are furnished by governors of provinces, each of whom has to supply eight every five years, receiving in return 250 taels per eunuch It was found, however, that the number thus obtained was totally insufficient, so a recruiting office was established at Pekin for the direct enrollment of candidates In the production of Chinese eunuchs four chief factors prevail, viz , greed, predilection, poverty and laziness Many parents sell ther male children to the mutilators or themselves castrate them in the hope of eventually sharing their earnings

Young men of from 25 to 30 years of age, some of them having wives and families, often accept emasculation, being allured by the prospects of emolument Poor wretches destitute of means and threatened with starvation agree to become eunuchs in order to gain a living Finally, a certain number of lazy, good for nothing vagabonds sacrifice their manhood to secure a life of indolence The operation is performed in a building situated close to one of the palace gates, but the operator, although his office is recognized and a hereditary one, having been for many years in the same family, receives no regular wages, being entitled to a fee of 6 taels from each individual operated on In the case of destitute candidates he exacts a lien on their prospective earnings Dr Matignon's description of the operation is as follows The subject, with his abdomen and thighs tightly bandaged, is placed supine on a low bed, one assistant tightly grasping him around the waist, while two more keep his legs widely separated The operator, as a rule, uses a curved implement resembling a pruning knife, but occasionally he substitutes for it a long pair of scissors With his left hand he seizes the parts, squeezing and twisting them to diminish the supply of blood , but before cutting he inquires for the last time whether or not the patient is a consenting party Adults, of course, answer for themselves, no anesthetic being used, but in the case of children the parents' word is accepted The reply being in the affirmative, a single rapid sweep of the hand serves to remove both penis and scrotum, the blade of the instrument passing as close as possible to the pubis A small piece of wood or of pewter shaped like a nail is then inserted into the urethra , the wound is washed two or three times with pepper and water, and several sheets of paper having been applied to the raw surface the parts are carefully and tightly bandaged The subsequent treatment is remarkable Immediately after the bandaging the unfortunate patient is seized by the assistants and made to walk up and down the room at a rapid rate, not being permitted to lie down for three hours For three days he is not allowed to drink anything, and not only does he suffer the pangs of thirst, but also has to endure the agonies of retention owing to the plug in the urethra On the fourth day the bandages are removed and the wretched creature is suffered to pass urine if he can If the urine flows he is looked upon as cured, but should the overstrained bladder refuse to act he is left to die, the virtues of catheterization being apparently unknown to the Chinese The amputation leaves a large triangular wound with the apex downward, which takes on an average about a hundred days to granulate Notwithstanding the primitive mode of procedure the operation is usually successful, and fatal cases do not amount to more than 3 or 4 per cent The most frequent complication is the incontinence of urine, but if this unpleasant symptom continues beyond a reasonable period the patient is condemned to flagellation, a mode of treatment which is said to yield the most excellent results

The Gradual Evolution of the Ambulance —In Boston, a somewhat novel departure has been put forth in the way of furnishing stretchers for the fire department employes It is expected that these means of relief will often be used at fires, before the police patrol wagons or the city ambulances can reach the scene The instrumentality of the late Dr Henry I Bowditch in bringing into play the humane idea of the ambulance has been sketched in an article in the *Independent* A portion of that article is given below Quite recently, the French Army Ambulance service has been holding some very interesting maneuvers, just outside of Paris, and we may be sure that the people who had sons and brothers falling ill by the hundreds in malarious Madagascar, watched these evolutions with keen interest A train was prepared for imaginary "sick and wounded," and was fitted up by the men of the ambulance corps It was taken to a suitable site, and a field hospital was improvised, in which the invalids were distributed according to the nature and severity of their imaginary injuries It was supposed that night would test the drill and discipline better than the day, and accordingly, it was chosen, and surgeons went their rounds, while the subordinates prepared suitable food for invalids "Then the 'patients'—who enjoyed it all as a huge and elaborate joke—were conveyed on stretchers and in ambulances to their barracks, and the 'ambulance drill' was over There is in existence, somewhere, a little pamphlet put forth during the War of the Rebellion, by Dr Henry I Bowditch of Boston, who had hastened to one of the battle fields of Virginia, on learning that a beloved son was wounded He describes the horrors of a ride in a common springless farm wagon—the only procurable vehicle—with a number of severely wounded men, over the rough ways that served for roads The sufferings of these men were terrible, and the sound of their groans and shrieks was destined to be heard far beyond the time and place rendered indescribably horrible by them The soul of the good doctor was filled with compassion, and on his return, with his dead son, he at once set to work to ameliorate the conditions that must follow every battle He strove to invoke the aid of Massachusetts, and the history of that attempt is enough to make one loathe the word 'politics,' so much did they do to obstruct and thwart a purely humane purpose, but untiring zeal, quickened by the memory of that awful night ride, at last accomplished an improvement in the means of conveyance and also the selection of a detail of drivers who were not—like the one he had known—drunken, profane and brutal Some of the ideas embodied in the comfortable ambulances that now follow in the wake of civilized warfare (if there can be such a thing as *civilized* war), and that one found in all large cities as part of the paraphernalia of a well equipped hospital, were embodied in 'sick wagons' before the close of the war and when it was over the matter was forgotten, and one quick, observant mind after another added its full quota of 'improvement' till it seemed to have touched the ideal, but within a few months the last desideratum has been attained in the addition of rubber tires to the wheels that must travel over the uneven city pavements Wherever an army corps goes into action now, it is sure to be followed by a train of these life and pain saving vehicles, with the red cross of universal care for the wounded sending forth its message of hope and comfort "

Marching from Malaria —For several years back, during the autumn, the troops stationed at Fort Myer, Va, have suffered severely from intermittent and remittent fevers In July of the present year the post surgeon, Capt W H Arthur, recommended that a practice march be made, for military purposes so far as the military point of view was under consideration, but for medical purposes as well, so as to remove the troops to non malarious localities during the season of active infection at Fort Myer The recommendation was approved by the higher authorities and the command, consisting of four troops of the Sixth Cavalry and a detachment of the band, with Capt Arthur and some men of the hospital corps, left the post September 8, and returned, after a march of 260 miles through northeastern Virginia, on October 5 Their route took them through Warrenton, Sperryville, Strasburg, Winchester and Harper s Ferry Good camping grounds were found at all points selected, with plenty of running water, usually of excellent quality A few cases of malarial fever occurred during the first week, none afterward The total number of cases was 8 in the command of 220 men The sick report showed 12 cases during the same period among the 80 men left behind in garrison In the corresponding period of 1895, 88 cases occurred in the Fort Myer command, then 268 strong These results are regarded as highly satisfactory The command will no doubt have fewer cases of recurring malarial fever during the coming winter

THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Oct 31 to Nov 6 1896

Major Edward B Moseley Surgeon U S A is granted leave of absence for four months, to take effect upon being relieved from duty at Ft Monroe Va

PROMOTIONS

To be Asst Surgeons with rank of Captain after five years' service First Lieut Henry C Fisher, Asst Surgeon, Oct 31, 1896, First Lieut Henry A Shaw Asst Surgeon, Oct 31, 1896, First Lieut Charles F Kieffer, Asst Surgeon Oct 31, 1896

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending Nov 7, 1896

Medical Inspector J L Neilson, detached from the "Maine" Nov 10, and placed on waiting orders

Surgeon L G Heneberger, ordered to the "Maine" Nov 10

D N Carpenter and F L Pleadwell, appointed Asst Surgeons from Oct 24

Surgeon G P Lumsden detached from the "Yorktown" Nov 2, ordered home and granted three months' leave

P A Surgeon J E Page detached from the ' Boston" and ordered to the "Yorktown"

P A Surgeon G Rothganger, detached from the Oregon" and ordered to the ' Patterson "

P A Surgeon R M Kennedy, detached from the "Patterson," ordered home and granted three months' leave

Asst Surgeon R S Blakeman, detached from the ' Vermont" Nov 12 and ordered to the 'Boston' per steamer of Nov 21

Asst Surgeon W M Wheeler, detached from the "Franklin" Nov 12 and ordered to the naval hospital, Mare Island

Asst Surgeon A Farenholt, detached from the Mare Island naval hospital and ordered to the '*Oregon* "

Asst Surgeon S B Palmer, detached from the naval laboratory, New York, and ordered to the 'Vermont "

Asst Surgeons D N Carpenter and F L Pleadwell ordered to the naval laboratory and department of instruction New York

Change of Address

Brown, J R, from 103 N Alabama St to 8 Sterling St, Indianapolis, Ind

Craig S S, from Alamosa, Colo to Chama, N M

Ewing F C from St Louis to Webster Grove Mo

Hammond J C, from Dennison, Iowa to Hanna Wyo

Luebbers A from Denver, Colo to 2407 N Jefferson Av St Louis, Mo

Mass F, from 25 Miami Av to 564 Woodward Av Detroit Mich

Montizambert F from Quebec to 180 St George St, Toronto, Canada

Murrell T E from St Louis, Mo to 2224 E 14th Av Denver, Colo

Marshall John S from Kankakee, Ill to Elyria, Ohio

Potts, C N from Silverton to 605 N Cascade St Colorado Springs, Colo

LETTERS RECEIVED

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ORIGINAL ARTICLES

OINTS IN THE DIAGNOSIS AND TREATMENT OF SOME COMMON NEUROSES

ead at meeting of the White Mountains White River and Connecticut Valley Medical Societies, Hanover, N H, Aug 3, 1896

BY ROBERT T EDES, M D
JAMAICA PLAIN, MASS

There are few occasions in medical practice where t is of more importance for the reputation of the physician, the satisfaction of friends, the attainment f the ends of justice, the advancement of therapeuic science, and the welfare of the patient, to estabish a correct diagnosis than when the practitioner as to decide between organic and functional disease he line between them, as is being constantly demnstrated, is indeed a shifting one, as new methods re invented new lesions are found where before it vas thought none existed, organs that to the naked ye have presented no morbid changes reveal to the microscope and the test tube alterations minute and itherto imperceptible or evanescent, but none the ess fatally standing in the way of normal activity han than those grosser ones which have until quite ecent times engrossed the attention of the morbid natomist

Conditions hitherto known to us only as variations n the vigor of action have been shown to be accompanied by changes in structure, transitory indeed and capable of complete restoration, but none the less bvious to the minute scrutiny of the microscopist Many of these are so slight and so evanescent that hey can not be demonstrated upon the human being, and whether they correspond accurately with what ve may suppose to exist in functional disorders is not as yet demonstrated, but practically we know that unning more or less parallel to them we may draw a line which for purposes of diagnosis and treatment is f great importance

In neurasthenia and hysteria, using the latter word n its most comprehensive sense, we have many sympoms which may also exist in organic diseases of the parts especially involved, and it is not always easy in a case before us to determine whether they are ependent upon such actual organic disease or exist erely as a disturbance engrafted upon the constituional condition Yet under hardly any circumstances s the proper treatment more directly determined by efinite and positive diagnosis Specific instances will show some of the difficulties better than general descriptions, but you will perhaps pardon me if I simplify matters by laying down, a little dogmatically perhaps, a few points which I do not think we are likely to go astray upon

There is nothing in neurasthenia or hysteria which cts as a prophylactic against inflammation, degeneration or new formations

It does not follow that because a patient has a few or many symptoms that are indubitably of hysteric origin that all are of that nature

It does not follow that because certain symptoms are thoroughly fixed and unchanging, or even if they do not yield to anesthetics, that they are not hysterical

Double optic neuritis is not found in mere hysteria

A well-marked, regular ankle clonus is hardly ever present and the knee jerk seldom absent in mere hysteria So far as my own experience goes I should say "never" in both these cases

There are many cases of hysteria which do not present all the stigmata thereof, the hysteria of Charcot is not common with us

In the cases of doubt and mistake which I shall report I intend no unkind criticism Some of them were my own

The will of Seth Adams provided for the care of " debilitated nervous persons, not insane," and this is the class which it has been the aim of the managers of the asylum known by his name to select Like many other schemes framed on lines a little different from the usual, it was at one time spoken of as "Adams' Folly," but it has abundantly demonstrated the wisdom and kindliness of the founder by the number of invalids, of exactly the class he intended and described, which it has sheltered and relieved It has never been considered a part of its function to treat cases of organic disease of the nervous centers and of late years insane persons have been admitted only by mistake or by too liberal a view of the cases on the part of the physician who sent them and whose opinion was accepted by the authorities Nothwithstanding this careful weeding, out of 1,000 persons received 84 were sooner or later affected with nervous diseases which could not be classified on subsequent revision as either melancholia, neurasthenia, hysteria or hypochondriasis Among these there were 10 of organic cerebral and 16 of organic spinal disease Debility, dyspepsia and uterine disease acccount for 73 of the 99 which were not, strictly speaking, nervous diseases at all Curiously enough, when we consider how often organic disease of the kidneys is accompanied by nervous symptoms, chronic Bright's disease is mentioned only once among these But this is less singular than to find the very vague and undemonstrable etiology of "suppressed gout" suggested among so many cases only once, at the very time when the elastic doctrines of "lithemia" were growing so popular

Mistakes or faulty estimates or failures of just appreciation, in diagnosis between organic and functional disease, can only be avoided by familiarit[illegible] wi
and careful attention to th[illegible]s of the
It is not enough to [illegible]e one
presence of gastri[illegible]ch
murmur, a scanty
to attribute to th

on the other hand, it is equally unsafe, because a patient has a multitude of symptoms, undoubtedly nervous in character, because many of them are distinctly recognizable as imaginary or exaggerated, to assume that she has no real foundation for any of them The case should be disentangled symptom by symptom and the important ones investigated so far as possible by objective methods, being pronounced neurasthenic only after a careful exclusion of any organic disease, especially that most nearly counterfeited, or even of any more well-defined neurosis

The interests of the physician as well as those of his patient and of science, are best promoted by such care, for a mistake on the latter side is more likely to be severely judged than on the other, for while he may be exposed to good natured ridicule among his professional brethren for needless alarm and over attention to nervous hypochondriasis, he is likely to be considered guilty of cruelty and neglect if he ignores sufferings which afterward prove to have a substantial foundation

CASES

A woman of 36 had been troubled for several years with severe headaches, occasional vomiting and gastralgia She had possibly a somewhat nervous temperament but not extremely so A diagnosis of gastric inflammation, and later, of neurasthenia with gastric symptoms, was made Some years after the first diagnosis and several months after the second a double optic neuritis was found and a cerebellar tumor diagnosticated, of which she died some months later No one can say just how long the tumor had been present and that the earliest symptoms may not have been correctly diagnosticated, but in the light of the autopsy, when we can always see so much more clearly, it seems very probable that the tumor was really of very slow development and had probably been causing gastric symptoms for years

Another female patient had a facial neuralgia which was called by a justly eminent neurologist hysterical She was later found to have a double optic neuritis and the case progressed steadily to a fatal result from a tumor of the brain Had this neuritis not existed, as it sometimes does not in such cases, it would have been almost impossible for a time, to make the true diagnosis conclusive, although there were other peculiarities that might well have cast a doubt upon the original one

A woman between 50 and 60 became depressed and weak She walked feebly in a peculiar crouching posture and her eyesight was defective She was considered a neurasthenic and sent to a hospital as such There the shape of her head attracted attention and it was quite clear that she was a case of the rare disease "hyperostosis of the cranium ' It would have been, however, quite difficult to substantiate this diagnosis if we had not been successful in obtaining a photograph of the patient as a young woman, for it was not until she was confronted with this, side by side with a recent one, that her sister would admit that there had been any change in the shape of the head This case was published in the July number of the *American Journal of the Medical Sciences*, which also contains Dr Putnam's elaborate article on the same subject

I find in an article by Byrom Bramwell a case quoted from Bennett of a girl of bad habits, bad temper, a persistent malingerer, who presented an array of symptoms which were calculated to and did deceive the very elect, for she was seen by several most distinguished physicians, among them Bennett himself, who all concurred in a diagnosis of hysteria She died suddenly and a large tumor was found in the right cerebral hemisphere

A woman age 35, had for some years attacks of supposed sciatica succeeding a tender spot in the back She went to New York to consult a physician but the pain disappeared, so that she went shopping and to the theater instead Later, when in a hospital, there appeared a curvature of the spine, which was thought little of and she was encouraged to get up, ride and walk After this she developed excruciating pains and tenderness in the abdomen and legs, so that it was almost impossible to move her to allow the bed sores to be dressed The lumbo-dorsal enlargement increased She died and there were found two large sarcomatous tumors in the abdomen attached the vertebræ and almost total destruction of the second and third lumbar It will be noticed in how many points, as for instance the disappearance of the pain under excitement, the early stages of this case resemble the ordinary "spine complaint" with which we are all familiar, and it was apparently, so far as one can judge from the treatment, so considered at the hospital, or, at the most, an ordinary case of sciatica involving no serious organic change

A young woman, not hysteric in appearance and manner, had for some years a persistent pain in the right hip, for which a diagnosis of "pseudo-hip-joint-disease" was made and acted upon for a long time At a later period careful measurements showed an enlargement of the upper part of the knee joint with loss of the normal outlines, and on deep palpation it was quite clear that there was an enlargement of the lower half of the femur This was perhaps a periostitis or possibly an ostitis, for which a specific origin was suggested by the family history

But for one case of this kind there are a dozen of the other, where a purely neurotic condition of the joint is treated for a synovitis Many years ago I treated a supposed case of chronic synovitis with great care, until my suspicions being aroused I sought the advice of an eminent surgeon, who confirmed my views as to its being a hysteric joint, but when I asked him if I should take off the stiff bandage he said "If she were my own daughter, so that in case of necessity or doubt I could put it on again without causing remark, I should do so, but as it is not best in this case to show any indecision I think you had better let it stay awhile longer " This I did, but when I did take it off it stayed off, and there has not in many years been any return of the trouble, as there might easily have been had the diagnosis been wrong and we were making light of a real disease of the joint

Coccygodynia is, in many if not most cases, a pure neurosis, and the removal of several of the joints is correspondingly often a failure, the "end of the spine" being just as painful as ever, when it is situated a few small vertebræ higher up Even the oft boasted and convenient "moral affect" of the operation is of little value in such cases

A little girl fell several feet, striking the lower part of the back upen a stone step There was severe pain in the hip joint but careful and repeated measurements failed to disclose any shortening, and the extreme difficulty of handling her in her nervous and excited state interfered with the examinations A diagnosis of "hysteric joint" was arrived at, but after a time the defect in the gait became so marked that this was no longer satisfactory and renewed examinations disclosed the fact that it was a case of that extremely rare accident "separation of the epiphysis of the head of the femur" Two precautions had been neglected in the first examination, one placing the patient on a *hard* support, and the second, partly in deference to the wishes of the parents, etherization

We can hardly call errors in diagnosis the hesitation which may very properly exist in the early stages and sometimes even in the later, of abdominal tumors

When some years ago a new service for nervous disease was being established at the Boston City Hospital by the transfer of patients from the general services, one of the first was a case of persistent abdominal pain which was sent over as "hysteria," but in a short time developed a tumor that was verified at the autopsy as cancer of the liver

A woman suffered from intermitting abdominal pains without swelling or distinctly localized tenderness, which were considered, although it is fair to say, with some reserve, to be of the ill defined and functional character common in neurasthenia Later, however, an appendicitis was diagnosticated and an operation planned, but when she was relieved, as she had been several times before, it was deferred and a few weeks later she died quite suddenly

A young woman was treated for some time for anemia and general debility until a diagnosis of myxedema being made, she recovered rapidly on desiccated thyroid capsules

Functional disorders of the heart are so commonly taken for something more fixed in character that I presume many of you, like myself, if a patient solemnly tells you that he has "heart disease," make up your minds before you begin the examination that whatever else you may find it will not be organic disease Some of the less defined forms of spinal sclerosis are liable, in their early stages, to be overlooked in a general diagnosis of neurasthenia or hysteria Errors in the opposite direction, however, are much more common and the persistent pains of nervous fatigue are attributed to "spinal disease"

Organic disease of the cord is hardly ever accompanied by pain in its immediate vicinity Pain, if present, is almost certain to be situated in the distribution of the nerves having their origin at the affected part

The distinction between vomiting of a purely nervous character, that due to organic disease, inflammation or neoplasms of the stomach and also from that excited by irritation of distant organs, as the uterus or the brain, or resulting from general poisoning as in Bright's disease is certainly a very important one, but as even the special authorities admit, not always easy

The first case I have mentioned, where a tumor pressed upon the floor of the fourth ventricle, is an excellent instance of one form of resemblance It is very often assumed that, if it can be clearly made out that the vomiting is of a purely neurotic or, as it is usually termed, hysteric character, the case is devoid of danger Vomiting, however, differs from the other hysteric reflexes in this, that while they may be violent and highly impressive upon the bystanders, they do not interfere seriously with any vital function, while on the other hand the constant and complete removal of food from the stomach, no matter what the cause, must inevitably destroy the normal nutrition Fortunately it is true, as the authorities state, that in nervous vomiting sufficient food is usually retained to sustain life or even to maintain a very fair degree of nutrition, but sometimes the imitation is so very perfect and vomiting that has nothing to do with any gastric lesion is so persistent, so uncontrollable, and so thorough, that the supplies are reduced below the minimum compatible with life Two such cases I have seen, where in one the diagnosis remained in doubt until the autopsy, and in another the physician, a man of sound judgment and long experience, firmly believed in the existence of a cancer until a stomach, healthy so far, at least, as any gross lesions were concerned, was removed and opened

Is it not possible that the supposed special frequency of gastric ulcer among young women which as an anatomic fact is denied by Brinton, and Hilton Fagge, may depend upon some cases of this kind and also upon those of metastatic vomiting of blood

The most complicated knot to be disentangled by the physician who, without the cultivation of a theory, the pushing of a fad, or the searching after a pet operation, seeks to assign to all the causes present in the case before him their true share in the causation, is undoubtedly that which ties together the pelvic organs with the general nervous condition Possibly a few of you can recollect the time when the thorough and intelligent investigation of local pelvic conditions was the rare exception, when dyspepsia, debility and spinal irritation were sufficient to cover all the anemia, backache, depression, nervousness, the general breaking down from which American women are supposed to especially suffer More of you can remember when "ulceration" was responsible for the same set of symptoms, to be followed by displacements, cervicitis, endometritis, ovarian disease and pus tubes, each in its turn almost the sole recognized condition and each with its appropriate and popular operation Who that is familiar with these changes, with the self satisfaction and boasting that accompanied each shift of theory, fondly supposed to be the final one, but just as evanescent as its predecessor, can possibly believe exclusively in any one of them? When such a variety of views is possible, it is hardly fair that any one should be reproached with errors of diagnosis, but it is none the less important that correct and well defined views should be at the basis of treatment

Symptoms both local and general are often indubitably present, but which are primary and which are secondary is a question which is unfortunately too often answered more in accordance with the preconceived views of the practitioner or of the patient, than with the study of the individual case What is required in such cases is rather an accurate balance than a sharp line

The gynecologist points to the constitutional results of constant pain, to the crippling due to the sagging of unsupported and hypertrophied organs, to infection from local inflammations, to the sapping of strength and vitality from too great functional activity, to the exhaustion of too frequent childbirth and lactation and when he sees these symptoms he is likely to attribute them to the set of causes with which his practice has made him most familiar The neurologist, on the other hand knowing how often he has seen local lesions remain without impairment of the general health, so long as the strength, muscular and nervous, remains good, and knowing that the exhausting effect of a burden is to be estimated not only by its own weight but by the vigor of the shoulders which have to carry it, that local pain may be merely the expression of general weakness, is liable to overlook their existence or to underestimate their importance But the consequences of erroneous opinions on one or the other side are by no means of equal importance to the patient If we suppose, what in practice rarely occurs, that the neurologist or the general practitioner is allowed by anxious bystanders to pursue the even tenor of his way and that he does overlook real disease in the pelvis, the worst that can very well happen is a loss of time and a subsequent correction, which may be more or less mortifying, as he has more or less strenuously asserted the entire innocence of the guilty organs But if, on the other hand, the practitioner direct his attention solely to local lesions, real or imaginary, he will probably accomplish one of two things His patient is only too easily lead to believe as he does, and there will be established that particular form of hypochondriasis known as "uterus on the brain," or else he will resort to heroic surgery, of which the most flagrant and pernicious form is normal oophorectomy, with a greater or less accompaniment of other mutilation according to fashion or the desire to go beyond the rival operator

I hope it is clearly understood that I am not talking about surgery, that is surgery for surgical disease, that I do not pretend to meddle with and am content to leave the question of the removal of a tumor or the opening of an abscess in the pelvis in the hands of the surgeon just as I would the treatment of the same lesions situated anywhere else When constant wearing pain was located in one spot, and that an easily accessible organ, and when a vague pathology with the facile and elastic phrase of "reflex," found it so easy to explain most various and distant symptoms by a local irritation, it was certainly not strange that the surgeon should have sought to remove the organ which seemed to be the cause, and that such operations should have had their run of popularity What, however, to be deprecated is now that experience has shown in how small a proportion of cases is the desired relief obtained, that a desire for surgical reputation or experience, the eclat of numerous laparotomies, should be such an irresistible temptation as to permit a useless mutilation, which has sometimes seemed to me to act as a mordant, fixing more indelibly in the fabric of the patient's whole being the deep dye of constant and hopeless suffering Admitting that there are cases so desperate and with so little chance of relief that such an operation, as offering something even slightly better than death, is fully justifiable, we know well that they are fortunately not so numerous as to afford any reasonable basis for some statistics which have been published The surgeon has no right to seek such cases They should be urged upon him long and strenuously by those who have had opportunity to observe thoroughly, and who are free from operative prejudice, before he undertakes them "Art for art's sake," is no proper motto for him

Some months ago I looked up as thoroughly as possible the histories of twenty-seven women who had come under my notice, who had had their ovaries removed for nervous affections Since then I have known of several more whose fate has not made me change my opinion Of the twenty-seven, three or four recovered or nearly so, one or two of these having been not far from the natural menopause Three or four others have improved, after years of invalidism, so that it may well be doubted how much their recovery was accelerated One died of causes not connected with the operation, one from cocain and one shot herself a few months after a "highly successful operation" One died of nervous shock a week after the operation One at least (not of the twenty-seven) is hopelessly insane Many are invalids and several have sought admission or readmission to the asylum

Local irritations, either in the form of pain or of necessary and frequently recurring muscular action imperfectly performed, and requiring for each repetition a conscious mental effort, are the most frequent accompaniments of nervous breakdown and possibly important factors in its production On the other hand, general weakness, acute or chronic, offers much less than the average and normal resistance to the local strain Thus we have other knots to disentangle in connection with various organs, of which after those already discussed, the eyes are perhaps the most important Eye strain, either of the muscles of accommodation or of fixation, arising from their essential weakness or from a constant more or less unsuccessful attempt to correct errors of refraction, has long been recognized as a cause of headache and many other nervous disturbances, but it is pushing a theory too far when it is made to lie at the base of all the most important neuroses A reading headache may have nothing to do with the ocular muscles, as in the case of a girl who read with her fingers and had no perception of light

I suppose no scientific man would think of asking "what is the necessity for making a remote diagnosis in cases where you have obvious dangerous conditions to be combated Treat the symptoms which threaten life, no matter whence they arise" There may be under some circumstances, and temporarily, a plausible foundation for such a view, and it is sometimes suggested by the laity, or by those who like to consider themselves more "practical" than their colleagues, but its inadequacy as a support for any definite therapeutic plan is obvious upon the mere statement of it

The treatment of neurasthenic conditions and its congeners, melancholia, hypochondriasis and hysteria, is sufficiently well understood and depends largely on attempts at the restoration of the normal nutrition and action of nerve tissue by rest, diet and exercise, with all the details and adjuncts These are always useful and sometimes sufficient

The special point, however, which I wish to emphasize is practically far from new, but I do not think it receives from the medical profession, at least in a theoretical point of view, all the attention it deserves We smile at the preternatural sagacity, the unerring intuition, the more than human sympathy and devotion, the miraculous successes of the interesting hero, or now quite as frequently heroine, of the modern medical novel, but notwithstanding our skepticism as to the power not born of knowledge, we must seriously recognize how important is the personal feeling and influence of the physician as expressed by him in definite statements or received by the patient in vague but not weak impressions of approaching relief The old faith is now becoming a modern doctrine and the art based upon it is called "suggestion" or "suggestive therapeutics" It is a portion of his art which should be most jealously guarded by every physician and never allowed to be monopolized by those whose ignorance ought to deprive them legally and morally of the right to use it at all Whether this is best carried on by means of hypnotism, with which in modern discussions it is very apt to be associated, my experience does not justify me in saying positively Its practitioners make very positive claims for it I am sure, however, that that is not the *only* useful way and that suggestion, as covering a great many methods of bringing psychic influence to bear, various in detail but one in principle, is often a most effective agent without hypnotism I have seen cases that if they had gone through with forms of hypnotism, or indeed those of any miracle cure, would have gained a notoriety quite as great as many which have figured in sensational reports of the daily press or make their rounds through the clubs and the sewing circles Now it is for this purpose that diagnosis, instead of being of the least, is really of the most importance

Setting aside the great injury which may arise from the neglect of efficient therapeutic measures of the ordinary kind by those who prefer to trust themselves to any of the acknowledged forms of faith cure, it is desirable that the physician, as distinguished from the faith curist, should be able to gain from his knowledge the firm persuasion and confidence which the curist gets from his ignorance Patients are shrewd observers of their attendants when their senses are sharpened by anxiety The curist can give them, with the boldness and undoubting sincerity which arises from knowing nothing at all about the nature of the disease in hand, assurances of the disappearance of their troubles, which the physician, unless he be certain of his diagnosis, would find it very difficult to assume, even if he thought it right to make promises which he is doubtful of being able to fulfill One of the most interesting phenomena of the last few years, from a medical and psychologic point of view, is the systematic development of the various forms of faith cure, with their colleges, churches, professors and patients The ready acceptance they find among persons of supposed mental cultivation would perhaps be not the less remarkable had it not always been so, which makes it less surprising but no less absurd We can not talk it down It is better to study and to profit by it A little inquiry is sufficient to show that the successful cases are those heard of, while the failures make but little impression, but even with a very liberal discount in this direction we must admit that people do get well under the influence of these humbugs, just as they have been doing for centuries from the king's touch, or the witch's brew, or Lourdes, or St Anne de Beaupre, the Zouave Jacob, the Vermont Healer, fashionable springs quack medicines made of the costliest of metals or the cheapest of weeds, or physicians good or bad, learned and ignorant Cures, like fish, do not grow any smaller by being talked about and many wonderful stories shrink immensely when traced back to their original sources The case which appears for a few days or weeks as almost a miracle sinks into obscurity, as specialist after specialist has been consulted and hospital after hospital is visited each with the relief born of renewed hope, but each leaving untouched the psychic substratum of weakness, congenital or acquired, or the habit of invalidism

But the residuum of real cures or of great permanent relief deserves our attention It is the strong stimulus of faith and hope, the turning of the attention into other channels than that of symptom watching, the firm conviction of the possibility of the disappearance of pain and weakness, which is the active agent in this kind There is no doubt that in many minds the active controlling forces are more easily reached by mystery and transcendental theories than by logic and observation, that imagination is a more powerful stimulus than scientific accuracy notwithstanding the liking which some have for the latter as a disguise A preternatural science which can, with one sweep of vague theory, wipe away all discussions of petty details, is much easier to manage and to fit to the individual case than a science founded on the observation of facts, and here utter ignorance gives to the charlatan an advantage which can not be met by the physician with any half knowledge Nothing but confident diagnosis can invest him with the well founded authority which the other can so easily assume because he knows not its dangers

The practice of "suggestive therapeutics" is no new thing, but physicians have been too apt to consider it rather an incident, than an important part, of their office and to attribute to their drugs or their knives what properly belonged to themselves and to their knowledge of pathology and diagnosis I have heard an eminent surgeon after a vivid description of his sufferings from the importunities of a patient whom he had skillfully relieved of her ovaries but not of her sufferings, say "I told her at last that she had better try 'christian science' " For my part I prefer that if the fates have ordered that my patient is to leave me and seek "christian science' or any other faith cure for the relief which I have failed to give, that she should do so unmutilated The least I can do is to leave her as well as I found her

But I much prefer to say in effect something like the following, and in order to do this I want a diagnosis "You *can* get well Now why will you not do this for me, whom I presume, from the fact of your having put yourself under my care, you consider a reasonably skilful and honest physician, and who have seen and studied enough cases of cancer of the stomach to assure you that you have not got one, just as willingly as for some old woman who does not know anything about cancers and who if you really had one would tell you, just as confidently as she does now, that it was all a product of your own low and earthly prejudices, and that a cancer of the stomach is just as easily gotten rid of by a mental effort as any other set of ideas" If she be a sensible woman and I have succeeded in gaining her confidence, she will get well but if she doubts my diagnosis, which is very apt to mean that she sees by my manner that I am not quite sure of it myself, if she prefers to believe that she actually has what I, with my low and earthly views, might call a cancer, but if she "puts herself on a higher plane of thought' there are no such realities as pain, or vomiting, or emaciation or death, that a fatal carcinoma is an invention of the doctors that is, if instead of being willing to admit that her personal symptoms may be psychic she has been persuaded that the whole fabric of pathology rests on an imaginary basis, then the faith curist may score as a miracle the result which I, as a man of common sense and resting only on a basis of ordinary knowledge could not attain as a bit of every [illegible] The power of reiterated and confident assertion unsupported by a particle of proof or argument, simply ignoring repeated demonstrations of its baselessness is enormous It is, for instance, at the basis of all advertising and we constantly see, in religion and politics, the most absurd doctrines gain a foothold by the simple process of stating them over and over again Such a position is a short lived one perhaps, when based upon no element of truth, but it seems a pity that so powerful an agency should not be made to do better and more permanent work by having something real behind it, and this something is for us a diagnosis

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ALTERNATING PERSONALITIES, THEIR ORIGIN AND MEDICO-LEGAL ASPECT

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The condition of double personality has, in a way, always been recognized, but no special importance has generally been attached to it by the profession Cases of protracted somnambulism or an occasional instance of catalepsy or trance, either with or without remembered visions or voices, were referred to as curiosities, but without any just analysis of the condition or attempt at classification, in fact, they have been looked upon as belonging to no system of recognized psychic phenomena, and in general, like many other variations from the usual personality—the recognized, reasoning, knowledge acquiring personality—they have been looked upon simply as *abnormal*, and been thrown into the category of either hysteria or insanity Of late however, the subject has received more definite treatment, many cases of the condition have been carefully observed, their peculiarities studied, and their relations to other psychic states have been considered Ribot, Janet, Richet, Kraft-Ebing and others have given attention to the subject, plainly recognizing the condition, whatever interpretation it may have received at their hands Beside the contributions of these acknowledged authorities in the profession and including them, a vast number of well authenticated cases have been collected by the English Society for Psychical Research, with its American Branch, and have been carefully studied by such men as Professor James of Harvard, lately president of the Society, Professor Sidgwick, and especially by Mr Frederick W H Myers, the English secretary, who has treated the subject in the Proceedings of the Society with a degree of knowledge and ability, as well as scientific accuracy, which has not been exceeded even by the noted writers before mentioned

At the meeting of the American Medical Association at Baltimore, I drew the attention of this Section to some facts and observations tending further to establish the reality and distinct character of this condition I described several well authenticated cases some of which had long been under my own personal observation, in which most marked and definite alternations of personality occurred, and in which the second personality was present for long periods of time—days, weeks and even months—taking complete possession of the physical organization, caring intelligently for it and in some instances changing it from a condition of disease, pain and helplessness to one of health, and ability to perform all the duties of life in a perfectly normal and efficient manner I also pointed out the relation which this condition bears to somnambulism and the veridical dreams of ordinary sleep, to the trance condition, and especially to the trance and somnambulism occurring in the hypnotic state

Kraft-Ebing, after an exhaustive study of the case of Ilma S by means of hypnotism, clearly differentiating three distinct states of consciousness, comes to the following conclusions "Frequently repeated experimentation makes it evident that the three different states of consciousness which may be observed and induced in this patient exist, typically congruous and apparently regular, under identical conditions It is further evident that these states of consciousness have absolutely nothing in common save that they are observed in one and the same person Thus this person represents three psychic existences"

It will be fully admitted, then, that a second, and in rare instances even a third, condition of consciousness is shown to exist in the same individual, that they are entirely distinct psychic states, having different and often entirely opposite characteristics, opinions likes and dislikes, distinct chains of memory and a different personal history, so distinct are they that they may be, as indeed they are, properly designated as distinct personalities, and called by different names Kraft-Ebing, however, in saying that these different states of consciousness have "absolutely nothing in common," promulgates an error, for, while the primary personality has no knowledge whatever of the second, nor of any succeeding personality, the second personality has always a more or less intimate knowledge of the primary self, but only as another and entirely distinct person Again, the second personality, while having knowledge of the primary self, has no knowledge of any third, nor of any subsequent one, so also the third knows *number one* and *number two*, but nothing of *number four*, should such a personality appear, and what is still more wonderful, *number two* can sometimes distinctly impress *number one* after that personality has resumed consciousness So important is this fact that I will illustrate it by reference to the case of Madame B, Professor Janet's hypnotic patient, with her three personalities—Léonie the original Madame B, Léontine, the second personality, and Léonore, the third

The patient being hypnotized and Léontine being present, before awakening her Professor Janet said, "Now, when I awaken you and Léonie comes back, you, Léontine, will make her untie her apron and take it off, and then tie it on again" He then awoke her, and Léonie—the usual Madame B—was present She, supposing Professor Janet had finished his experiment, of the nature of which she never had any knowledge, was conducting him to the door, chatting in the meantime in her ordinary simple, almost stupid manner At the same time she commenced to fumble at her apron strings and, without knowing what she was doing, untied them At that moment Professor Janet called her attention to the matter, saying, "Your apron is falling off," whereupon she looked surprised and said, "Why, so it is," and at once, with full consciousness of what she was doing, she returned it to its place and re-tied it Professor Janet considered the experiment complete, not so Léontine, she had not finished the work that had been laid out for her, and again Léonie unconsciously commenced to fumble at her apron strings, again she took off the garment, and then quietly replaced and tied it, all the while talking to Professor Janet and perfectly unconscious of what she had now for the second time done.

The next day when Léonie was again hypnotized Léontine, as usual, appeared, and at once said to Professor Janet, "I did what you told me yesterday, why did you tell her that her apron was falling off? Just for that I had to do the job all over again," thus showing the activity of the second personality while the primary self was present and in full control and also the influence which *number two* was able to exert over *number one*. Again, Léonore was able to make Léontine hear a voice reproving her for her incessant gabble, by which also Léontine was greatly alarmed. I have also witnessed similar phenomena in cases under my own observation.

Having, then established the fact of separate and distinct states of consciousness, or personalities, it is possible to classify the cases or, in other words, to point out the different conditions under which this second personality or subliminal self has been observed.

1. There are the cases of distinctly alternating personalities, in which the change from one to the other occurs suddenly and spontaneously and an entirely new personality comes upon the scene, entirely sane, with perfect knowledge of and in perfect harmony with its environments, continuing not only for hours, but for months and even years, performing the duties of life in a wholly normal, useful and exemplary manner, and sometimes, as in Dr. Azam's case, Félida X, much better than the original self could do.

2. There is the very large class of cases in which the second personality or subliminal self is brought to the surface by means of hypnotism. Of this class Professor Janet's case of Madame B., Kraft-Ebing's Ilma S., Dr. Dufay's case of "Jane" and my own case of "Miss A." are marked and typical examples, and to this list doubtless every physician who has had experience in hypnotizing could add examples. It is this subliminal self which hears the suggestions made by the hypnotizer, and impresses them upon the primary self on its return to consciousness, so as to insure their fulfillment as post hypnotic suggestions. It is that also which influences the functions of organic life, causing such marked changes in digestion, circulation, excretion, and especially that wonderful influence on the vaso-motor system which by suggestion causes vesication, stigmatization and kindred marvels.

3. There are the startling phenomena which occur in ordinary sleep, namely, somnambulism and veridical dreams.

4. There is the large class of changes in personality as well as intelligence brought about by recognized pathologic conditions of the organism.

Beside these classes, there is the whole series of automatic actions—automatic speaking, writing and drawing, also hallucinations of hearing voices and seeing visions, all of which belong to the varied action and influence of the subliminal self.

It is of course impossible to attack the metaphysical problems which arise with reference to the origin and nature of consciousness together with the resulting personality and its varying phases, but some idea regarding the nature of personality is necessary to the further consideration of our subject.

Ribot, in his monograph on the "Diseases of Personality," tells us regarding this matter that "we are confronted by only two hypotheses,' one the old supernatural theory, that personality is the fundamental property of soul or mind, the other, which he calls the new and scientific view, that it is "only the expression of organism." In other words, mind is the product of organism, but when the question is asked "Of what is organism the product?' his last word is "To biology belongs the task of explaining, if it can, the genesis of organism. Psychologic interpretation can only follow in its wake." He points out the necessity for a reasonable theory for the genesis of organism, but for himself he simply ignores the whole matter, he takes a ready-made organism with its germ of consciousness and assumes, without the slightest proof, that the germ of consciousness is the result of the organism. This, plainly stated, is Ribot's "very recent theory," and this is the particularly scientific method by which it is maintained.

Let us follow up our author's statements, for reasoning they can scarcely be called.

A little further on he says "It will then be time" (after having studied its constituent elements), "to compare personality with the lower forms through which *nature has essayed to produce it*, and to show that the psychic individual is the expression of organism."

Here a new element, nature, is introduced, and it is quite important to understand what he means by it. Is nature active or passive? Ribot says, "Nature essays to produce personality through lower forms"—and presumably it does so. That is *activity*. Nature, then, is active, whatever else it may be, and there must of necessity be an active principle in nature which works, which produces effects. Now, it matters not what we call that power in nature which works for definite ends, as Ribot particularly explains, and produces definite results. We may, with the supernaturalists, separate it, personify it, call it deity and clothe it with attributes, or with Herbert Spencer call it the unknowable and leave it naked, we may with Matthew Arnold call it the "power which makes for righteousness," or with Schopenhauer consider it the power which makes for evil, by whatever name we please to call it, it is still the *power which works*, and it is with this power in nature that Ribot and his school must reckon, and not with the "very old" theory of supernaturalism.

In 1874 at the meeting of the British Association at Belfast, John Tyndall, that Titan of science, as the incoming president of the association, stood up in that assembly of distinguished *savants* and pronounced these memorable words: "Abandoning all disguise the confession which I feel bound to make before you is, that I prolong the vision backward across the boundary of experimental evidence and discern in matter, which we in our ignorance have hitherto covered with opprobrium, the *promise* and *potency* of *every form of life*."

Throughout the lands where science was known there went up a cry of indignation from the champions of supernaturalism on the one hand and from the hard and fast materialists on the other, but the pendulums which measured the progress of each of these sentiments had registered their widest swing, and from that day to the present each has been moving in a gradually ever narrowing arc.

It is not with supernaturalism and ready-made souls that Ribot has to *reckon to-day, but it is with that promise* and potency *in nature* which lie beyond the reach of scalpel, microscope and laboratory rea beyond the boundaries of experimen back of consciousness and back of organism, in matter itself we discern the promise and potency of every form of life. It dwells in inorganic matter, urging it onward to higher forms to crystallization, to protoplasm to the organized cell and then to the higher forms of life with all their wonderful attributes. It is this that expresses itself through organism, without it organism has nothing to express. It is *this* in nature which "essays to produce personality through lower forms," remains its basis after it is produced and is its promise of still further development.

Throw out of consideration then the first of Ribot's "only two hypotheses," by which he so confidently assures us that we are confronted in our search for the genesis of personality and in its place put this "promise and potency" which is in nature, whose attributes we need not define, and the two hypotheses from which to choose stand thus:

1. Personality along with its accompanying organism is the product of a power inherent in nature.
2. Personality is "only an expression of organism."

The first is broad inclusive and presents a reasonable explanation of processes which lie beyond and back of experimental evidence. The second is narrow exclusive, timorous and explains nothing. To examine these propositions critically, to trace this power in its evolutionary action, first as attraction or repulsion or simple *motion* in inorganic matter, as *life* in the organized cell and lower organic forms, as *sensation* in the animal world and as *mind*, consciousness, personality in man, is far beyond the limit to this paper, but it is this power in nature, ever striving for fuller expansion and expression which has projected a universe teeming with motion, life sensation and mind.

We have then to deal with personality as something more than the evanescent exhibition of consciousness, a mere function of organism, it has a basis and quality drawn from the reservoir of power which is in nature, power that was before organism and was that by which and for which organism came into being, to argue otherwise is to reverse cause and effect, and make the greater subservient to the less.

But it may be asked, how can this view be reconciled with the theories of multiplex or alternating personalities and the subliminal self? I reply, not only does it harmonize with, but it materially strengthens that theory. Ribot says truly: "Our conscious personality, the consciousness which each one of us has of his present state as compared with prior states, can never be more than a feeble portion of our total personality which remains buried deep within us." We have seen how this personality is recognized by all competent writers, we have also seen how promptly this deeply buried portion of our personality comes to the surface and manifests itself as distinct and capable of independent action, and under what circumstances this occurs.

How did these various phases of our personality, so distinct and different, claiming for themselves separate existences and names come to exist and why do they manifest themselves at all? As Ribot would describe personality by a single word *habit*, so I perhaps with more obvious propriety, might describe the appearance of a second personality with the single word *atavism*.

It is a well recognized fact that certain clearly defined traits or characteristics, either physical or mental, existing in ancestors, near or remote, may, after passing by one or more generations, at length crop out distinctly and unmistakably in a later one. Physical peculiarities or deformities, tendency to certain diseases, or peculiar mental characteristics are frequently in this manner transposed, also a peculiar insight or genius for certain pursuits, as, for instance, hunting, fishing and frontier life, a military career, mathematics, music, acting or scientific pursuits, existing in a marked degree in some near or remote ancestor may, indeed, be inherited directly in the succeeding generation, but, on the other hand, it may pass over one or more generations to appear in an unmistakable manner in a later one.

Suppose, for instance, that five generations back there appeared a man of marked and thoroughly bad characteristics married to a right-minded, moral, even religious woman, that he was a vilifier of morality and religion, profane and vicious in life and unscrupulous in his dealings with others, that the generations which immediately succeeded him came under influences which aided by inherited characteristics from the mother, led to lives of morality, uprightness or even conspicuous piety. In the fifth generation, however, appeared a man who in the midst of these moral and religious environments was conspicuous for his profanity, vicious life and unscrupulous conduct, so identical with his remote ancestor as to make the connection undoubted. Where did this evil tendency exist during the four intervening generations? Let us tap the main line between the two extreme points and see what information may be extracted. In the fourth generation was a mild, religiously inclined woman, but of unsound health and perhaps of unstable personality. From some sudden shock, syncope or loss of consciousness occurs and, as in the case of Félida X., on recovery an entirely new and different personality is found to have taken the place of the original one. It professes to be a man and to the horror and consternation of the good people surrounding her she commences to curse, to vilify everything good and upholds sentiments and practices of the most offensive and criminal character. This person has a chain of memories and a personal history entirely foreign and unknown to the primary self, but quite consistent with those of the remote ancestor whom we have considered. In an hour or a day the primary consciousness has returned, but there is not the slightest knowledge or recollection of the character which she has represented in her second personality, and very likely the case is diagnosed as temporary insanity, in a more primitive age it would have been called possession by an evil spirit. It was in reality the strongly impressed characteristics of a distinct personality which had lain dormant in the subconscious self for three generations, now coming to the surface temporarily under favoring circumstances in the fourth. In another generation it actually appeared, an *atavism*, as the primary and usual personality. In like manner a personality of conspicuous goodness or conspicuous talent might pass over many generations of mediocrity or of evil doers, and appear, a pleasant atavism, after one or many generations had intervened. Less extreme personalities might be formed in like manner, and more than one might be impressed upon individuals in successive generations, giving rise to the perplexing and much debated condition of multiplex personalities. Kraft-Ebing, as we have seen, found in his patient "three psychical existences" or personalities Professor Janet's patient, Madame B , possessed three widely differing ones, while one of my own cases presented three and another two, alternating spontaneously at longer or shorter intervals, not including the cases in which changes of personality were brought about by hypnotism

With this view of the origin and nature of ordinary as well as alternating personalities, it is not difficult to determine the medico-legal aspect from which these cases should be viewed It is evident, first, that the primary self must not be held responsible for actions either good or bad, committed by the second or any succeeding personality, since it is absolutely ignorant of the doings or even of the existence of these personalities It would undoubtedly be just to restrain the individual from violence or wrong-doing, during the presence of the personality committing the wrong, but no longer and it would be abhorent to all our ideas of justice to take the life of or even to severely punish the individual whose identity we have been accustomed to associate with the ordinary self, on account of wrong-doing committed by any succeeding personality, while the ordinary self was wholly unconscious

It would have been manifestly unjust to punish Kraft-Ebing's Ilma S for theft committed by her second personality, and wisely the court so held Again, in judging of the sanity of individuals characterized by alternating personalities, we must *judge* each state or personality by itself without reference to other states, but must *act* chiefly with reference to the primary self

Insanity is the temporary or permanent loss of an intelligent comprehension of surroundings and relationships to such a degree as to incapacitate the affected person for the fulfilment of the duties and relations of life, and consequently render him a menace to himself and others In the application of this or any other definition of insanity to particular cases, the fact that it is not the individual's primary or ordinary self which is being examined should make no difference in the conclusion arrived at if the action of the second self falls outside our accepted definition then that self is sane Félida X , in her second condition had even a clearer comprehension of her surroundings and her relations to others than when in her primary state, and the same may be said of many other individual cases of the same kind, but if found insane, in disposing of the case reference must be had to the fact that it is not the primary or usual self that is affected, and *that* self when present should not be made to suffer

The same rule is applicable in judging of insanity or crime appertaining to persons whose actions are automatic, even though consciousness is retained, as is frequently the case with those who have the faculty of automatic writing, speaking and other automatic actions carried on by the subliminal self, the ability of the subliminal self to influence the action of the primary self, as previously shown, must be taken into account and the degree of responsibility judged of accordingly

Professional experts by opinions given in courts of justice, often virtually decide questions of liberty and even of life but he who gives such opinions without taking into account the possible influence and power of automatism and the subliminal self, assumes a responsibility which better instructed men would consider grave, indeed

In conclusion, I would say that the fact of alternating personalities, or the subliminal self with its manifold manifestations, has a very important and practical bearing, and demands a much wider and more intelligent study than has hitherto been accorded to it by our profession

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A PLEA FOR REFORM IN CRIMINAL JURISPRUDENCE

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In all ages and amongst all peoples, civilized and savage, so far as we have any record, the instinct of race tribe or national preservation has led them to regard the welfare and prosperity of the people as the supreme law No individual interests were paramount to that of the people, and personal rights were curtailed, or sacrificed to the public good For ages this has been formulated into the familiar maxim, *Salus Populi est Suprema Lex* And as a corollary, it has been a maxim that "the few shall suffer, or be sacrificed (if need be), for the preservation or safety of the whole," hence, the democratic doctrine "the majority shall rule" Among primitive peoples, this principle was carried to the extent of destroying feeble or decrepit offspring who would become a burden or hindrance to the state or tribe, and in the interest, too, we must assume, of race integrity Among tribes, the chief decided what was best for his people, and his word was the law, to which unhesitating obedience was exacted Ancient nations assembled their wise men, who considered all sources of danger to the people, and, conscientiously guarded against them It remained for a twentieth century civilization, an enlightened republican government, to ignore this "supreme law,"—to give it a secondary place, and to make the protection of *property* the highest and dearest consideration, in the enactment of laws to utterly disregard the danger of race degeneration, to permit, nay, promote and accelerate the propagation of untold evils and dangers to society and the race, through the medium of heredity That a government should—possessing the power and means to do so—prevent an increase in the criminal element, is a proposition which requires neither argument nor defense, that it should permit—nay, deliberately propagate and encourage an increase of criminals out of all proportion to population, is monstrous

In light of the rapid and alarming increase of crime and criminals in this country, it is evident not only that there is something radically wrong in our system of criminal jurisprudence, and that our penal methods are a failure of the ostensible ends sought, but that reform has become an imperative, and immediate necessity It is demanded by every consideration of safety to society, public morals, public economy, and especially duty to tax-payers, who bear the burden, not only of this, but of every other class of defectives leaving out of consideration the higher ground of humanity to the unfortunate victims of heredity and environment (for such are criminals for the most part), and omitting all reference to the claims of posterity to protection What that burden is, may be faintly estimated when we reflect upon the expense incidental to the detection, arrest, prosecution and punishment of the vast hordes of criminals, together with the pay of the army of constabulary, police detectives, law officers, judiciary and prison officials, and the maintenance of prisoners, and an idea of the magnitude of the danger threatened and constantly augmented, may be gathered from statistics.

According to the last United States census (1890), there were, in 1850, 6,737 prisoners in the United States, or one to every 3,442 of the population. In 1890, there were 82,329 prisoners, or one to every 757 of population. While the population of the United States has, in four decades, increased 170 per cent, the prisoners have increased 445 per cent. The number of criminals at large, evading arrest or unknown, is to be added to this. At the present ratio of increase, it will be a matter of very short time when the criminal will outnumber all other elements of population.

Nothing could testify more emphatically to the inadequacy of our system to meet the requirements than these figures, nor appeal more forcibly for reform, nor could anything illustrate more fully the needs of prophylaxis against hereditary criminals.

With such facts before us, it behooves a rational people to inquire into the causes that lead to such disastrous results, to ascertain wherein lie the defects in our system of jurisprudence whereby these things are made possible, to ask what are the factors concerned in this production and great and rapid multiplication of this evil, and to seek, by every legitimate means, to arrest it.

Beyond doubt, heredity and environment are responsible for a large share of it, the laws regulating marriage are sadly deficient, and licensing the sale of liquor as a source of revenue to the State, is another evil, next in order of consequence and potency, and I believe it can be shown also that the *execution of our penal methods operates to contribute to the ever swelling hordes of criminals*, rather than to checking or diminishing it, as I will endeavor to show.

The system of criminal jurisprudence in this country appears to be founded on the sole idea of revenge, and *punishment* to be the end and object of all penal statutes. And this, too, under the claim and pretext that it is justice. I can not see that there is the remotest connection between punishment for crime, and justice, there is not an element of justice in it. If a man slay you, in what way are the demands of justice satisfied by his execution? What satisfaction is it to the widow and children left destitute by your death? Or, if a man fire my house, wherein is "justice" satisfied by sending him to prison to labor? In either case it is not justice—it is revenge, and who gave the State the right to take vengeance? Nor is "justice" the aggrieved party. it is I—or your family—who should be satisfied. Justice and equity are synonymous, and contemplate *restitution*, to make amends and the ends of justice would be better served were the murderer or incendiary stripped of his possessions for the benefit of those robbed by his hand. And where the State metes out punishment to a man for crime committed under the influence of liquor, it is worse than a farce to call it justice. it is the rankest kind of injustice. The State licenses the sale of liquor deriving revenue thereby. It thus aids and abets the saloon-keeper to tempt the young, the weak the reckless and the unwary to put that into their stomach which robs them of reason for the time being, and deprives them of the power to resist an evil impulse. Murders have been committed unconsciously by young men under the mania of their first intoxication. The State hangs or imprisons that man, robs his wife and children—deprives them of their bread winner and of bread—and overwhelms them with disgrace—maybe brings them on the hands of the tax-payer—as inmates of the poor farm, and calls it justice! What a cruel wrong! What a burlesque on justice! The justice in this case would seem to demand restitution to the imprisoned man for blighting his life, and the State is accessory before the fact,—and the one so put to death—the State should make restitution to his widow and orphans. The evil of the day and generation is the saloon.

But, so long as newspapers are run to make money, or, as is often the case, subsidized by the whisky ring, it were idle to preach against it, they will never aid science in any reform in the interest of truth, humanity or religion. No paper can be found with the honesty and independence to advocate any measure of reform—or to disseminate any truth in the interest of humanity that conflicts with that interest.

The failure of our system to either protect society or diminish crime is in a measure due to lack of vigorous enforcement of the laws, but principally it is due to defects inherent in the laws themselves.

Under the existing system, in order that crime may be appropriately *punished*, crimes are classified and a penalty affixed to each. One great difficulty is that criminals are not classified also. The fact that a murder, for instance, was a first offense is not considered. There is a penalty for murder (death by hanging) and all murderers, old and young, male and female, good family or bad, penitent or indifferent, first offense or fortieth, must expiate it to satisfy the ends of justice.

There is a penalty for homicide, and all homicides must conform to the penalty, there is no qualifying circumstance, except *the degree of the offense*. It is simply left to the judge to determine the crime, classify it, and looking in the book find the companion piece to it, the penalty—and fit the one to the other, and to the jailor or sheriff to execute the penalty. The young boy for his first offense committed, it may be in resentment of an insult and from an impulse beyond control or from fear of his life, or what, unfortunately, is most frequently the case, while *under the influence of liquor*, or, if a theft, committed from want, or temptation, or what not, is thrown first in jail to await trial. There he is surrounded by a vicious, brutalizing environment, huddled, perhaps, with a lot of filthy negroes and Mexicans, all hardened criminals, in fact, made to breathe an atmosphere fatal to every instinct of self-respect and calculated to crush out every atom of manhood. When brought to trial the fact that it was his first killing, that he was drunk at the time and for the first time in his life, and had not even a knowledge of what he had done, that, realizing the situation he is deeply penitent and would give worlds to undo it and make restitution—does not in the least qualify the offense, except, perhaps, it may secure for him the lightest punishment *that goes with that kind of crime*. it is a definite term and carries with it eternal disgrace, social and business ostracism and *disfranchisement*. Could anything be more unjust? Why what would be thought of a doctor, for instance, who, having all his cases diagnosed for him, should treat every one of a class exactly alike with the same dose and without regard to age, sex, temperament or environment? Here is a case of fever, here is a formula for fever for all comers Here is a case of rheumatism, here is the treatment for rheumatism for all ages, sizes, sex, color or "previous condition"—*the book says so* Failure would be a foregone conclusion And so with our classification of the criminal, it is a lamentable failure

Again, by existing methods the State essays to purify the morals of society by perpetrating a shocking crime The law says "thou shalt not kill," and forthwith gives us an object lesson in killing and in cold blood!

The pretext for putting a man to death to protect society can only apply to the habitual or born criminal, and the ends can be accomplished by a means less revolting Surely there could be no such pretext urged in a case like that of Dr Jones, a man who lived a life of usefulness till past 50, a respected citizen, prominent, indeed in business and society He had been president of this society A circumstance occurred which so exasperated him that he felt compelled, to vindicate his honor, to take the life of the man who had injured him, as he thought Although justified in his own mind the law held it to be murder, and he was sentenced to death (a subsequent trial sentenced him to twenty years in the penitentiary) Because of this one act, would this man have been held to be a danger to society which must be eliminated? And even with regard to the natural criminal, is not the question of responsibility to be considered? Take Holmes, Guiteau or Prendergast, acknowledged dangers, they could no more change their nature than a leopard could change his spots, it was born in them to kill Should they, morally insane, confessedly, be cruelly put to death for responding to the promptings of a natural predisposition? Why not lock them up securely, as we do man-eating wild beasts in captivity? Because they might or would kill if they had liberty, do we feel called upon to shoot them?

But heredity and environment, as potent as they are, and as prolific, are not the only factors of increase I believe that it can be demonstrated that the existing conditions and methods of our system not only fail of their ends, but operate to defeat them and become a tributary to the growth of crime and the multiplication of criminals Take an illustration A boy of 17, small for his age, was wanted for suspected complicity in a burglary He came of respectable parentage, among whom crime was unknown, but owing to environment he grew up to be regarded as a bad boy The policeman was afraid of him and attempted take him by stratagem He employed a chum of the lad to call him to the door at night when the policeman sprang upon him out of the darkness, and without a word, covered him with a pistol The boy, in fear of his life doubtless, and by instinct of self-preservation shot and killed the policeman For this he was sentenced to seventeen years in the penitentiary at hard labor At this writing he has served eight years, has a record of uniform good behavior, has given every evidence of repentance and a desire to lead a correct life, the end and object of his incarceration has been accomplished he is "reformed," he has been *punished* But, no his sentence was for a definite term of years, that's the law, and he must serve nine years more, when better or worse, he will be released, deprived of every right of citizenship, *sans* pride, *sans* hope, ambition or self-respect, his father's name dishonored, his widowed mother's heart broken, the best years of his life, all of his youth spent in a felon's cell, what a mockery his "liberty" will be What will he have to live for? Is it likely that he will become a moral, upright and useful man? Or will he, feeling that he has been unjustly punished, that the State is his enemy and mankind his natural foe his hand, like Ishmael's against every man, will he go to swell the ranks of the hardened and irreclaimable criminals? Who can ask?

This case will show the absurdity and the worse-than-uselessness of the "definite sentence" system It makes criminals rather than cures them

The inadequacy of existing statutes to meet the requirements is an exceedingly grave matter Not only that they fail to repress crime and protect society and operate to increase it, but the want of confidence on the part of the public engenders a feeling of insecurity which drives them to the commission of those acts of lawlessness for which they are so severely but unjustly censured Self-defense and the protection of home are the strongest instincts of human nature The people of Texas are as loyal and law-abiding as are to be found anywhere, but when they realize that the methods of dealing with the rapist and the murderer and the double crime, rape *and* murder (and that, too, most frequently, of tender young children), are not effectual to put a stop to it, even when the law is swiftly executed, but, on the contrary, that an execution, even in the horrid form of the stake, actually appears to *incite others to the crime*, it simply drives them to madness The horrible execution of Henry Smith at Paris must have been known to every negro in Texas, but it did not deter another negro from a committing a similar outrage a short time after at Tyler, and he met a similar fate Nor have the several prompt hangings for rape been attended with more salutary results *Rape is notoriously on the increase*, not only in Texas but in other States, and lynch law is brought into execution

In support of the assertion that an execution incites others to crime instead of having a deterrent effect upon the evil disposed (such is the theory of our system—"to strike terror in his soul" and awe him into good behavior), I refer to statistics to show that in England, of 167 criminals condemned to death, all but three had witnessed executions May this not be a psychologic problem not yet unraveled by medical science? Our knowledge of hypnotism is yet crude and imperfect May it not be that persons, especially the ignorant, witnessing so shocking and impressive a sight receive, unconsciously, the "suggestion" to murder? What is it that prompts a person to do, against his will and intent, an act which he knows he should not do, and for which he will speedily be put to death? Poe calls it the "Imp of the Perverse"

But the worst feature connected with the subject, and that which drives the people to desperation is, almost as many offenders escape as are caught and when they are caught, there are so many delays appeals writs of error, feigned insanity, etc , that the feeling of insecurity is intensified to the last degree, and the people take the matter in their own hands They do not understand the reasons why, but they recognize the fact that the laws can not be depended upon for the suppression of crime and the protection of their families, and their acts are a spontaneous though very crude and primitive effort at a remedy

I am inclined to believe that the fountain head and source whence flows this great evil, lynching, can be traced to the unwise policy that obtains of paying legislators day-laborers' wages In Texas the per diem is $5, and after sixty days it is reduced to $2 It is hardly to be expected that such remuneration would command a very high order of law-making talent Statutes enacted by men who can afford to leave home and business for $2 per day, who know nothing of the requirements of sanitary legislation, and do not want to be told, and could not fairly comprehend the subject if they were told, are apt to be defective, ambiguous and conflicting, and so afford grounds for endless "errors," protracted trials and tedious delays With the exception of a respectable per cent of really able men—lawyers, for the most part, who have political aspirations or some reason for serving, other than the mere pittance of pay, and who really make a pecuniary sacrifice in so doing—the legislatures of many States are composed of average representative citizens, farmers, merchants, mechanics, or else young "limbs of the law," and this class is in the majority It is this element that defeats all attempts at reform, who ridicule the efforts of the medical profession to secure improvement in the medical practice acts, and who mocked and insulted the noble Christian women of whom Mrs Gardner tells us in the *Arena*, in their efforts to amend the "age of consent" statutes It would be difficult, I apprehend, to make this sort realize that their ignorance, bigotry or, most of all, conceit that makes them refuse to listen to any suggestions of reform in accord with science, and intolerant of advice, is the real and first cause that leads to lynchings They are loud to denounce it, and without a suspicion of the truth they serenely set about to enact statutes *to punish the lynchers*

Indeed, may it not be that herein lies the one great cause of the inadequacy of our system? In the enactment of the criminal and health statutes the requisite knowledge is not brought to bear The making of all our laws is in the hands of men who make no pretensions to science, and they are notoriously averse to being advised

Science is applied knowledge The most civilized races are the most scientific and progressive We live in an age of enlightenment and advanced civilization Never, at any period of the world's history, have the facilities for the acquisition of knowledge and the dissemination of information been so great in every department of life, and yet in many respects, and especially in that pointed out above, vital to society and human happiness and well-being, man fails to profit by experience and neglects to make use of the knowledge gained

Knowledge, acquired in whatever way, is applied in the various arts, and made subservient to man's wants In enlightened governments there are heads of departments whose function it is to gather and formulate the knowledge bearing upon their respective interests This is true of everything except man's most vital interests—his health and well-being and the preservation of a healthy standard of race In this great country there is no department of public health, and State medicine is a nullity The vast store of knowledge gained by laborers in the field is not utilized in framing laws for the protection of the public health and morals and race preservation

On this head Judge Benjamin Abbott, in apologizing for the jurists and the want of progress in the jurisprudence of insanity (Ref Bk Med Sci , p 122), says "The rude division into 'idiots' and 'lunatics' of two centuries ago survives in jurisprudence to-day Jurisprudence has no peculiar methods of studying the subject, but has been accustomed to follow the course of medical science, and to accept, sometimes only after long hesitation and inquiry, the results which skillful and experienced alienists have united in declaring established"

Jurisprudence has not studied the subject, yet will not accept the conclusions of those who have, here is a confession of bigotry and intolerance

Judge Abbott here uttered a pregnant truth It is the key to the problem, why our criminal and insanity laws are a failure

To confess that the jurisprudence of insanity has not been revised in two hundred years, because jurists will not accept the conclusions of scientific investigators in this field, when in the meantime insanity has been studied in all its phases, and subdivided and classified till now there are nine forms of idiocy and six forms of madness known to alienists, would indicate that one or other of the forms of idiocy or mania had seized upon our law makers Our statutes belong to past ages

Granting that the system is a failure, what should be done to remedy it?

The thinking members of the profession are being rapidly converted to the belief that *crime is a disease* that habitual criminals are *sick persons*, and that their condition calls for a more enlightened method of management They know that many, if not most of them, are subjects of hereditary transmission of vicious temperaments, and are victims of vicious environment Sooner or later a change must come, precisely such change as has taken place with insanity and inebriety It has not been very long ago that drunkenness was regarded as a criminal offense, or rather, as a misdemeanor,—and was punished, nor since the insane were regarded as monsters,—or "possessed of a devil" that was to be exorcised only by blows and by straight-jackets, nor since the poor dement or idiot and the harmless maniac were, by law, burned as "witches," an act for which civilization is not yet done blushing Opinion has changed radically, as regards these unfortunates and with it, the system of dealing with them The insane, and in some States, the inebriate now find repose and tender care and rational treatment in the great eleemosynary institutions of an enlightened age, and so opinion is fast changing with reference to crime and criminals and the mission of science is to bring about a corresponding change in their status and management

Professor Flint, in his paper, says (*N Y Medical Journal*, Feb 15, 1896)

"Crime is a disease of our social organization It is true that it is ineradicable, but it may be restricted within much narrower limits than at present exist Crime calls for intelligent and scientific treatment While crime can not be abolished, all criminals are not hopelessly affected with crime Crime may be a constitutional disease, as in the born criminal, or it may be due in individual cases to surroundings, teaching or example—a sort of contagion It has been abundantly shown that criminals may be divided into two great classes, the curable and the incurable, but the disease which we call crime has nearly as many phases and varieties as are presented by the nosological catalogue Society needs the aid of competent men to undertake the task of separating the curable from the incurable—to restore the former to usefulness, and to protect our social organization against the latter Jurists, so called law givers, and those who execute the law, have failed In my opinion, the only hope is in the medical profession "

The problem is, *how can these views be impressed upon those who are entrusted with the enactment of the statutes?* The utter failure of the State Medical Association in Texas to awaken in the minds of legislators a just appreciation of the dangers attending the indiscriminate practice, or the unrestricted sale of nostrums deleterious to the public health, gives but little assurance that anything the medical profession of this State might bring before them upon this great subject, would receive more respectful consideration

State medicine is the application in the aggregate, of the principles of medical and sanitary science to the prevention, cure, mitigation or relief of evils which affect the social body, and the prevention of those evils to posterity It bears the same relation to the state or society that the individual physician bears to his clientele, and embraces measures of prophylaxis against future ills as against existing evils For illustration, any measure calculated to improve the race, restrictions upon marriage limiting the privilege to the fit, or castration of natural criminals, or insane criminals, or the criminal insane, to cut off succession as here advocated, is as much within the scope of its beneficent functions as is quarantine against disease, indeed, the entire treatment of criminals, as hereinafter proposed, comes most appropriately within its province, and when we shall have succeeded in getting a department of public health, the first step will have been accomplished The state owes no higher duty to posterity than to protect it against a multiplication of those evils we now deplore, and are ineffectually battling against

Medicine has ever been characterized by humanity and benevolence The profession do all in their power to relieve suffering Our grand hospitals and asylums are monuments to the benevolence and unselfishness of medicine Yet it seems to be, after all, a false philanthropy, as it enables the afflicted ones to live on and beget more children for the next generation to care for Thus evil comes out of good, and our best intentions react to the ultimate detriment of society By practical charity, alms-giving, and the tender care for the defectives and diseased, the operation of nature's laws is defeated, and the unfit survive and breed and multiply like flies

On the subject of marriage, Judge C H Reeves of Plymouth, Ind, in a work called "The Prison Question" the most logical exposition of the subject I have ever seen, says

> "In regulating marriage, the law says that none shall marry within the third degree of consanguity, and in some States the fourth, because marriage between near blood relations is likely to produce offspring deformed or diseased, physically and mentally Insane and idiots shall not marry, because they can not make a contract, and because of hereditary tendency to produce idiots and insanity It makes it a crime to marry in any of these cases In this it aims to prevent degenerate offspring and protect individuals and society against the evils that would attend such offspring
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> "But if the vilest mortal that can live—one not in these classes—sees proper to marry, the law issues the license for the asking, taking a fee, makes a record, and leaves the offspring and society to shift for themselves in the best way they can The confirmed inebriate, the weak minded and semi idiotic, the confirmed criminal, the offspring of the half witted and insane, if lucid at the time—the incurably diseased, the scrofulitic, the syphilitic, the hereditary pauper, the depraved and reckless—even paupers while in the poorhouse, and criminals while in jail, are in every way encouraged, given license, and are protected by the law No thought is taken for the unfortunate offspring, nor for the body politic or social, and the irreparable evils that must fall upon all The church adds its sanction, and its ministers aid in making these civil contracts by performing the ceremony with benediction and prayer
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> "If it is wise to prohibit polygamy, marriage between near relations between the insane and idiotic, because of heredity and transmissions of evils, it is equally wise to prohibit it in all cases where like evils may follow If the law has the power to prohibit and punish violations in one case, it has equal right in all others
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> "There is an endless procession of children from all these sources coming into the mass of population to live lives of crime, immortality, want, suffering misfortune and degradation, transmitting the' taint in constantly ever widening streams, generation after generation, with the ultimate certainty of the deterioration of the race, and final irreparable degeneracy
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> "It seems to me that there is a moral obliquity that affects the entire mass of political, social and religious leaders and teachers on the subject here being considered When we analyze the views and actions throughout, the glaring inconsistency and unreasonableness that seems to fill them has no parallel in any other matter seriously affecting individual and the public welfare Among the first is a false modesty, that is shocked by any allusions to the most evident and debasing facts that stare everybody in the face on all sides, that rub everybody at every turn
>
> "The church devotes its time and energies to prove that every human body possesses an immortal spiritual body, that is liable to future torture unless it be made perfect in morals and truth, and that must be done while it remains in its mortal shell It pleads and raves for prohibition of liquors and tobacco, for forced observance of Sunday, for forced attendance on schools, for recognition of God, Christ and the Protestant religion in the civil constitutions, and for sundry other restraints and commands, with penalties, in order to save these imperiled souls Reformers go about the land devising ways and means to educate, civilize, provide for and elevate the ignorant, the degraded, the poverty stricken that pervade every plane of human action, and wander in and out among the people every where And yet these, with general society added, hold up their hands before their faces in horror, if some honest soul who has truth for a guide, calls them to look and points them to the source of the evils they are battling with, and tells them they are responsible for it all, for the law is only their united will in statutory phraseology That it is the result of their voluntary blindness and false conception of civil, moral and religious duties That they are seeking to deal with evil conditions alone, instead of the causes of them, and while trying to mitigate the evils in the results, are supporting and enlarging the causes That on every other plane of action they recognize and deal with the causes, but with men and women they ignore the causes and battle with results alone That they regard domestic brutes as of more importance than they do human beings "

Doubtless Macaulay had this condition of society in mind, when, forty years ago, he predicted the disintegration and downfall of the American Republic Writing to Henry S Randall, in 1857, he said "I have long been convinced that institutions purely democratic must, sooner or later, destroy liberty or civilization, or both Your constitution is all sail and no anchor Either some Cæsar or Napoleon will seize the reins of goverment with a strong hand, or your republic will be as fearfully plundered and laid waste by barbarians in the twentieth century as the Roman Empire was in the fifth, with this difference—that the Huns and Vandals who ravaged the Roman Empire came from without, and that your Huns and Vandals will have been engendered within your own country, by your own institutions "

It would seem that a rational people, with such facts before them, for instance as those furnished by Dugdale's history of the Jukes family, from whom 1,200 criminals descended, would profit by it and take steps to close the flood gates of evil And the Jukes case is not an exceptional one by any means, there are thousands such, they exist every day, everywhere

The magnitude of the evil and [illegible] re[illegible]ing from our criminally lax marriag[illegible] appalling. Yet few ordinary citizens, those who pay the taxes, have a conception of it, or realize the extent of the cruel wrong done them by permitting it.

An intelligent comprehension of the subject would, therefore, indicate that the first step in needed reform is State regulation of marriage with a view to the arrest of descent of crime by hereditary transmission of the tendency. And dealing directly, then, with the crop on hand, it is suggested that punishment, as such, as a penalty, should have no place in a civilized code. It is permissible only as a feature of discipline incidental to reform, that as criminals are divisible into the two great classes, the curable or accidental criminal, and the habitual or incurable of Lombroso, the end and object of penal enactments should be the *cure* of the *curable*, the reclamation to usefulness of those who are amenable to it, and the *elimination of the incurable*. To this end, therefore, a classification of all criminals is necessary.

Classification can only be done by medical men. The entire subject comes legitimately within the scope of State medicine, here indeed, it finds its most appropriate field.

When the character of the crime has been determined by the court, it would seem to be in accord with the requirements of the case and the dictates of an enlightened humanity, that there should be medical men to *diagnose the criminal*, and prescribe the course which, in their judgment, is best calculated to meet the demands. If it be one of the curable class, the treatment, consisting of restraint, discipline, hygiene, education, environment and healthy labor should be such as to induce a determination to never offend again. Pride and self-respect should be fostered, for they are the highest incentives in life to good behavior. The term of imprisonment should depend upon the progress made in reformation, on good behavior—the culprit made to realize that when he gives evidence of fitness to be trusted with his liberty it will be restored to him. And primarily he should be lifted above the environment calculated to debase him in his own mind. The incurable—the born criminal of Lombroso—should be dealt with as a permanent enemy to society, and the first aim in his case, after sequestration, should be precautions against a progeny, to cut off his race. When a man has been diagnosed as a natural, *i. e.*, an irreclaimable criminal, twice convicted of any felony, along with the forfeiture of liberty for life and all other rights, he certainly should be deprived of the right (and the power, should chance permit) to inflict a progeny upon the next generation. Can anyone give a single reason why this right should be respected when all others are taken away? I think not. The strange veneration people seem to have for *those particular possessions*, which induces them to plead that they be spared even when every other right has been forfeited and taken away, is the last remnant of the old Phallus worship, a superstition of the fifth century.

Capital punishment is becoming more and more abhorrent to thinking people, and is being very generally condemned by medical writers as barbarous, useless and unjustifiable, and castration as a substitute therefor is rapidly growing in popular favor. Much of the prejudice that existed against castration is disappearing under the light of reason. Indeed, it seems to me that there is every reason why capital punishment should be abolished and isolation and emasculation substituted, and the fundamental principles of justice demand that, where possible, restitution should take the place of imprisonment. It is true, privation of one's liberty might be called punishment—it is so, incidentally, but let it be done for the purposes of reformation and for the improvement of the morals of society and not of revenge—miscalled justice. Corporeal punishment never made a school boy good, and the morals of a community can never be purified by a system of punishment entailing eternal disgrace as penalty for misdeeds. The sense of injustice arouses resentment and stirs the worst element in one's nature.

The time has come and the occasion demands—if we would make an effort to preserve the integrity of our race and the safety of the republic, when the medical profession must look at this question from the higher standpoint of guardians of society and conservators of the public well-being, and none the less as trustees for posterity. It should be insisted that the voice of science be heard, that the great truths revealed by study and research, by laborious investigation, experimentation and compilation—truths vital to the dearest interests of mankind should be utilized in medical and criminal jurisprudence. Our entire system needs to be recast along broader lines, and made more comprehensive, remodeled and adapted to the changed conditions of a 20th century civilization. As at present constituted it deals with results alone, and utterly ignores causes. We concern ourselves with, and can not solve the problem of what to do with the criminals of this day and generation—without a thought toward, or an effort to close the avenues through which pour in ever swelling tides of the evil we vainly attempt to remedy.

Sisyphus, condemned to eternally roll the stone, had no more hopeless, endless task than we are now engaged in, nor the Danaides one more impossible of accomplishment, it is as irrational as the attempt to purify a sewer by throwing disinfectants into the outlet. The helpless, worthless, vicious and dangerous come faster than love, philanthropy, religion, science and law can care for, reform or dispose of them.

Doubtless, by an organized effort on the part of the two learned professions, medicine and law, Congress can be awakened to the necessity of taking steps to make available sanitary knowledge in the jurisprudence of medicine and crime, to create a department of public health and hygiene, whereby such knowledge can be disseminated and made to reach and influence legislators, however unwilling.

While we may never be civilized up to a system of scientific breeding of peoples (as we do our stock), it unquestionably lies within the scope and power of State medicine to eliminate much that is evil, and bring about great improvement, even in the next generation in the physical, moral and intellectual status of society. And chief among the agencies effective to this end will be State regulation of marriage, and sterilization. This is the mission of rational medicine, to the accomplishment of which the profession should address itself, with the conviction that duty requires it, true philanthrophy dictates it, policy suggests it, and it is demanded by every consideration of justice, mercy and humanity.

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SOME EXPERIMENTS ON RABBITS MADE WITH A VIEW TO OBTAINING A STUMP FOR THE ACCURATE FITTING OF GLASS EYES

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY J HERBERT CLAIBORNE, JR , M D

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In *Gaillard's Medical Journal* for May, 1889, I gave a detailed account of some experiments made upon rabbits with a view to obtaining a better stump for the fitting of glass eyes In those experiments I planted sponge and cotton in the scleral cavity and sponge in the capsule of Tenon The results of those experiments were negative In experiment No 1, the planting of sponge in the scleral cavity, the edges of the scleral wound held firmly together except at the forward angle, for four weeks At that point the sponge could be easily seen by inspection, lying snugly packed away, the stump was firm and compressible and the catgut sutures which had been used to draw the edges of the scleral wound together had become absorbed

The entire stump was then removed for microscopic examination There was a small zone of granulation tissue in the meshes of the sponge, numerous groups of pus cells, cocci and rod-shaped microörganisms also were found In no portion of the fundus, nor anteriorly in the neighborhood of the wound was there any evidence of an active destructive process

In experiment No 2, cotton was planted in the capsule of Tenon and the lips of the conjunctival opening were brought together with catgut sutures The healing was kind and the stump was soft and compressible About the third week after the operation, the stump commenced to bulge and finally at the end of the second month, pushed its way through the conjunctiva, apparently through the line of sutures, and presented a white honeycombed appearance Microscopic examination of the sponge showed that it was completely surrounded and penetrated at its periphery by a zone of granulation tissue and lying in the central depths were numerous fine granules, silicious spicula and many isolated leucocytes

In experiment No 3, absorbent cotton was planted in the scleral cavity The wound healed kindly and a soft plump stump persisted until the seventh week after the operation, when it was discovered that the cotton had broken through the sclera *above* the line of the sutures The stump having been removed with the cotton, it was attempted to make a microscopic examination, but it was so torn in being removed that nothing satisfactory could be obtained Granular matter, a few microorganisms and scattered pus cells were found among the cotton fibers

These experiments seemed to warrant me in drawing this conclusion amongst others

The implantation of sponge and cotton into the scleral cavity is probably not feasible in the human being

I dismissed the idea of implanting anything in the capsule of Tenon, owing to the slight support given by the united lips of the conjunctival wound

In my final conclusion I made the following suggestion

Based, as yet, on no experimental observation or experience, I suggest glass wool and asbestos as artificial "vitreous" bodies in modification of Mr Mules s operation

Following the suggestions contained in this, I have planted asbestos and glass wool in the scleral cavity of rabbits, and I shall now detail those experiments and their results

Experiment No 1—June 6 Blond buck A cataract knife was passed through cornea and lens at the sclero-corneal margin and brought out opposite in the long axis of the palpebral fissure The lens and vitreous body were removed and the iris and cornea were cut away with scissors Volkman's spoon was used to better evacuate the contents of the cavity Some small shreds of choroid were left A ball of glass wool, made up of prepared modeler's wax, was introduced into the scleral cavity and the lips of the wound were closed with interrupted silk sutures, which were carried through conjunctiva and sclera

Experiment No 2—Black and white buck The contents of the scleral cavity were removed as in the first experiment, and a ball of asbestos made up with antiseptic wax was introduced into the cavity Silk sutures were used as before This buck took ether badly, having just had a full meal, and indeed kicked so viciously that the line of sutures were not so accurately adjusted as in the first case It took each one some time to recover from the effects of the ether, and the blond at one time seemed moribund The lids were not sewed together, as in temporary tarsorraphy, nor was any attempt made to dress the eyes A double line of interrupted silk sutures was made, the smaller silk being used to close up the spaces between the larger sutures The animals were put into a cage and allowed to run about

June 7 Blond buck No 1 Lids stuck together There was considerable discharge of a lymph-like character and so much swelling of the conjunctiva that the stump could not be seen Black buck No 2 Lids not stuck together, but chemosis which hid the stump

June 10 Both bucks in good condition chemosis and discharge gone, sweet, white exudate along line of sutures The animals remained in excellent condition

June 19 Stitches were removed from each stump Union of wounds perfect, but line of union quite irregular The animals were seen at intervals of a week or two, till Nov 30, 1895 when the stumps were carefully inspected On examination, a black ball was found lying loose in the scleral cavity of the blond buck (subject of experiment No 1) The line of sutures had parted and the ball had remained the original size, when broken up it appeared to have the same character as when first introduced except that it was black externally

In the black buck the lips of the scleral wound had fallen in and partly united When they were opened nothing was found within It is interesting to observe that this animal developed an abscess in the side during the last month of his captivity which, apparently, in no way interfered with his appetite or health

These experiments were performed under strict aseptic precautions Instruments, sutures absorbent cotton, etc were sterilized by boiling in a 2 per cent solution of sodium carbonate The asbestos and glass wool were sterilized by boiling in a saline solution for twenty minutes It was then shaped into small balls to fit the scleral cavity and dipped, by means of sterilized forceps, into boiling modeler's wax, which had been thoroughly sterilized previously by repeated boilings After the balls had cooled the superfluous wax was removed from the balls, leaving the cores covered with a thin film that was required to keep the asbestos and glass wool in the spherical form The hands of my assistant and myself were thoroughly disinfected after the manner at present in vogue, and a solution of bichloride of mercury (1-3,000) was used to disinfect the conjunctival sac of the animals as well as for an irrigant during the operations

This work was done in the Physiological Laboratory of the College of Physicians and Surgeons, New York, and I am indebted to Dr R H Cunningham, of that department, for his assistance, both in the preparation of the materials used and in the performance of the operations

Alfred Graefe of Halle first proposed and performed the operation of evisceration of the eyeball He did it chiefly with a view to cosmetic effect in the fitting of glass eyes This operation can scarcely be said to have much advantage over enucleation, since it leaves behind the crumpled sclera in addition to the muscles, fat and conjunctiva of the orbit Since the glass eye is a concave shell fitted into a concavity, the grasp on the orbital tissues must be chiefly at the edges of the shell It was supposed that the crumpled sclera would fit into the concavity of the shell, and thus assist it to move in conformity with the movements of the orbital tissues This occurs only to a limited degree, and when one considers the fact that the etiology of sympathetic ophthalmia is not definitely determined, it seems a questionable procedure to leave so much of the globe behind

It is not to be forgotten that the operation of evisceration is indicated, according to its author and advocates, in those cases in which no malignant neoplasm, iridocyclitis or sympathetic ophthalmia exist Nevertheless, I hold that it is not an ideal procedure to leave in the orbit a crumpled mass of hard, unyielding tissue in which the ciliary nerves are squeezed and bitten by cicatricial contraction

This operation has been popular in Halle chiefly, to some extent on the continent of Europe in general, and to a very limited extent here In England it has been modified by Mr Mules of Manchester, who proposed the introduction of glass balls into the scleral cavity after evisceration From a theoretic standpoint the advantages of this operation over simple enucleation are obvious Good movement of the stump is achieved, for the extrinsic muscles are still attached to a firm and resistent globe, and the circulation in the blood and lymph spaces is encouraged by the persistence, to a certain extent, of the original form of the sclera But the introduction of any hard, unyielding body into the scleral cavity can not, likewise, be considered an ideal operation If some soft compressible substance, that would not be affected by a sojourn in the scleral cavity, and that would not burst the sclera could be found, a classical procedure might be instituted

The experiments which I have just detailed show conclusively that, although no serious inflammation results in either eye from the planting of asbestos and glass wool in the orbital cavity of rabbits, the line of healing will part after several months It is probable that the same result would be obtained in the human being

From the study of this subject the following conclusions are drawn

1 The operation of enucleation does not leave in the socket enough of a prominence to permit of the accurate and comfortable fitting of glass eyes

2 The operation of evisceration, while it leaves a better stump than the operation of enucleation, is open to obvious objections

3 The operation of Mr Mules of England is objectionable because it subjects the ciliary nerves to constant pressure between two hard and unyielding surfaces, because the glass balls are subject to fracture, and because they are difficult of introduction

4 The implantation into the scleral cavity of some soft yielding body, which will not degenerate, which can be rendered aseptic, which will not swell by imbibition and which will not become absorbed, seems to be a rational procedure

5 Sponge, cotton, asbestos and glass wool are not tolerated in the scleral cavity of rabbits, and would probably not be tolerated in that of man

6 The operation of enucleation, while it does not yield satisfactory cosmetic results, is, nevertheless, the most popular and safest procedure in those cases in which the removal of the ball or its contents is indicated

39 W 36th Street

EDEMA OF THE OCULAR CONJUNCTIVA

Read in the Section on Ophthalmology, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY F W HIGGINS, M D
CORTLAND N Y

One of the most constant symptoms of Bright's disease is edema Puffiness under the eyes is perhaps the symptom that the physician first looks for in a suspected case That to which I wish to call attention is the much rarer condition of edema of the ocular conjunctiva Edema may occur in any locality where there is cellular tissue, often without our being able to determine just why it is so especially marked in the location where we find it

Some time ago I was called into the country to see a patient confined to the house by nephritis, exhibiting a peculiarly marked case of ocular edema or chemosis The invalid was a married man, 22 years old, a telegraph operator Four years before, he had been suffocated by coal gas and remained unconscious for some hours to this circumstance he ascribed his illness He had been treated for albuminuria, in Michigan, for about two years, when he returned to New York State to place himself under the care of a professional relative, for whom I examined the eyes I found the young man in bed, pale, with general anasarca, the urine loaded with albumin, and all the symptoms of a parenchymatous nephritis He was totally blind, not, as you may suppose, from albuminuric retinitis, but from edema of the ocular conjunctiva This had first formed a chemosis, then had increased until the raised folds met over the cornea These swellings were red not having the pale, translucent appearance one might expect In each they presented the aspect of a superior and inferior fold—like distended lids The mucous membrane was dry and appeared thickened from constant contact with the air The lids could not be closed One would estimate that four drams of fluid was included in each eye

The treatment was incisions, made, I must confess, too cautiously the first time, for my attention had never been called to a chemosis of any such extent, and I did not know what pathologic condition might be concealed beneath The oozing of serum was slow, but sufficient to enable the cornea of one eye to be seen at my next visit The incisions were repeated with the effect of enabling me at my third visit to examine the fundus, which I found almost filled with white patches of choroidal change, which we might call edema of the choroid

Now a peculiar complication occurred The cornea was no longer completely covered by the folds, and still the edematous and thickened conjunctiva prevented the lids from closing, which compelled me to give directions in regard to the cornea, to prevent damage from exposure

I saw him no more, but learned that he had uremic convulsions, after which sight and general symptoms improved, and he returned to Michigan Here the conjunctivæ were treated by cautery, but the patient died about three months after I last saw him

I am not able to give any reason why the ocular conjunctiva should have become so infiltrated in this case No iodid of potassium had been administered, or any other treatment that could induce it There was no history of a previous affection of the eye No discharge or symptom of gonorrhea

This condition seems to be analogous to that of edema of the glottis This, as we know, often arises suddenly and alarmingly, and at times without an apparent adequate cause Max Knies[1] speaks of edema of the ocular conjunctiva, but says that it appears to be very rare

Brecht[2] describes one case of chemosis in Bright s disease The patient was six months pregnant when she had an attack of eclampsia, with other symptoms of acute Bright's disease He saw her five days later, when she had detachment of the retina and chemosis After fourteen days this had disappeared His only explanation of the detachment and the chemosis was that they were both due to some especial tendency for the edema to manifest itself in the eye

Professor Schiess, writing in 1870, thinks the subject of conjunctival edema has been neglected He would ascribe all such cases as my own to preceding choroidal changes interfering with return circulation I noticed that the retina could be seen with a plus glass in my case, but neglected to record the strength of it According to Professor Schiess' view the pathology of my case would be that excessive infiltration of the retina and choroid first occurred, which caused passive congestion of the anterior portion of the eye, with exudation of serum and leucocytes That there was a sub-acute inflammatory condition he would predicate from the dark red color of the mucous membrane and the thickening of the tissues With this condition of the conjunctiva present, he would assume the presence of choroidal disease

Since my patient had no mental symptoms there is less analogy to those cases in which chemosis has been noticed as a result of interference of the return circulation from the eye within the cranial cavity Lawson Tait gives three cases in which after surgical operations chemosis occurred Death ensued and section showed thrombosis of the cerebral tissues

Dr Hunter[3] reports a case of chemosis complicating acute meningitis and refers to cases by Leyden and Bierbaum Here the same cause is evident, that is, intra-cranial pressure interfering with return circulation

Dr Swan M Burnett[4] records a case of acute chemosis which he thinks was due to neuralgia complicated with slight changes in the choroid, sufficient to hinder return circulation in some degree

Zehender[5] refers to an acute case of marked edema of the ocular conjunctiva rapidly recovering He is doubtful in regard to the causation The patient had had sub-acute pneumonia a short time before and the attack came on with sneezing

DISCUSSION

G E DE SCHWEINITZ, Philadelphia, Pa —There are cases of acute edema of the conjunctiva which may be due to urticaria, or to an idiosyncrasy to certain food stuffs, especially fruit I also believe that some cases are occasionally the result of the administration of drugs, particularly massive doses of iodid of potassium, the ocular manifestations replacing the ordinary symptoms of iodism

EXCESSIVE HEMORRHAGE AFTER ENUCLEATION OF EYE BALL

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY ROBERT SATTLER, M D

CINCINNATI OHIO

The danger of excessive hemorrhage after enucleatio bulbi is ordinarily a matter of little concern In most cases the application of a compress bandage or a compress applied and held in position by the surgeon or an assistant for a few moments after the operation is completed controls and averts unnecessary bleeding That hemorrhage, so excessive and uncontrollable as to endanger the life of the patient from shock and loss of blood, can occur even after this operation so simple in technique and by common consent considered almost devoid of dangerous sequences, is supported by the accompanying reports of two cases recently observed

In every case of enucleation of the eyeball, in addition to rigid aseptic precautions before and during the operation, irrigation of the empty orbital cavity with hot sterilized water, 1 to 10,000 bichlorid solution or biniodid solution, with the least possible traumatism, is resorted to immediately after the operation is completed After this a compress is held against the closed lids for a short time by an assistant or a compress bandage is applied

This is done as a safeguard against hemorrhage and possible sepsis In those cases in which the bleeding is unusually profuse after the severing of the optic nerve and surrounding blood vessels or straining and vomiting from the anesthetic occurs during or immediately after the operation, the index finger is introduced into the apex of the orbit and firm compression against the ophthalmic artery, or its principal branches, is made until it is arrested After this a compress bandage is applied and the patient watched for several hours by an assistant or trained nurse

This simple after treatment, guarding against other complications and hemorrhage, and so generally adopted by ophthalmic surgeons, had always been found effectual in my surgical practice I have had several exceptional experiences of copious hemorrhage but all were controlled, after four or five hours, with little difficulty In two cases bleeding continued for twenty-four hours and was finally arrested only by the introduction of hot antiseptic tampons into the cavity secured by compress and bandage after all other measures had been exhausted A sharp attack of cellulitis orbitæ followed, but recovery was, after its subsidence, uneventful In another case the hemorrhage was unusually free and persisted for many hours, regardless of compression with bandage and hand The use of hot compresses did not influence it favorably After all other means had failed ice was introduced into the orbital cavity and arrested the bleeding Owing to the discomfort and pain not to mention greater liability to cellulitis, attending the introduction of ice, tampons, styptics, etc , to arrest exceptionally profuse hemorrhage, these measures are only justifiable in extreme cases It was resorted to in the cases referred to only after all other methods had been faithfully tried and had yielded negative results and the patient had become exhausted and frightened

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[1] The Eye in Its Relation to General Diseases

[2] Arch für Oph xviii, 2 pp 102

[3] Arch f Klin Med iii p 601

[4] Archives of Ophthalmology Vol ix p 159

[5] Klin Monatsblätter f Augenheilkunde, viii i

Before tamponade was resorted to, digital compression had been tried repeatedly and the orbital cavity emptied of its clots many times and pressure with hand or bandage had been persistently done The sitting posture and absolute quiet was invariably enforced Salines and ergot administered In these cases the hemorrhage was not arrested until tampons were introduced and compression made in addition, but there was not in a single instance any intimation of a possible serious termination Syncope occurred several times from fright in one case, and marked prostration and cellulitis orbitæ resulted in the second case, but aside from a longer confinement in bed than is usual never persistent ecchymosis and swelling of lids, no serious sequences could be ascribed to the operation In none of the cases could a hemorrhagic tendency be established, either individual or hereditary, nor did the patients belong to families in which hemophilia had shown itself in remote branches I have always believed that even in a bleeder, the hemorrhage following or attending the removal of an eye, could, with the methods of direct and indirect compression at our command, be controlled without much trouble My experience with one of the cases I am about to describe, however, has taught me otherwise

Case 1 —R C , age 16 Traumatic iridocyclitis R E , T—2 Globe painful, sympathetic irritation unmistakable and persistent Enucleation imperative Enucleation February 9 of right eye at Ophthalmic Hospital Ether narcosis Free but not excessive bleeding during operation Patient remained in recumbent position for three hours and was removed to his home in a carriage Had persistent nausea after operation but vomited only once At 7 P M was called to see him and found that profuse bleeding had occurred Bandage, pillow and linen thoroughly saturated and consistent flow of blood in spite of compression, to which father had resorted Dressings and bandage removed and orbit emptied of clots and firm compress applied and held for ten or fifteen minutes, after this a bandage and compression with the hand and large pad of gauze was kept up until 9 o clock At this hour it was found that hemorrhage, in spite of bandage and pressure, had continued A hypodermic of morphia was given and for two hours he was quiet and slept at intervals At 11 o'clock I was sent for and found the patient much prostrated, with feeble and rapid pulse The bandage was thoroughly saturated with blood and numerous compresses had been applied over the bandage, evidenced that the bleeding had been profuse The dressings were removed and attempt made to tampon the cavity, but the infiltration was so firm that it was not successful Several small pledgets of aseptic gauze were introduced and compress and, bandage applied and pressure made from without He was placed in a sitting position and compression of common carotid resorted to and another hypodermic of morphia administered The following morning I was again sent for at an early hour and found that patient had been bleeding all night and that he had been restless During the last hour his condition alarmed his parents He was delirious and the prostration excessive After a hypodermic of strychnia and whisky and hot applications to the extremities, I removed the dressings and found that complete extrusion of the contents of the orbit had resulted The picture presented was a startling one Complete evulsion of the conjunctival sac with complete involution or rolling under of the eyelids so that it was impossible to distinguish the lid border The swelling was so great that it resembled an exuberant, eroded, sarcomatous mass and the hemorrhage unchecked A small tampon saturated with persulphate of iron was introduced into the gaping opening of the conjunctiva and a compress, dipped in a styptic solution, applied and held with firm pressure against the extruded mass Compression of carotid was also resorted to but caused so much pain that it had to be abandoned Salines were given freely and also ergot At noon general condition was about the same Patient as if in a stupor and very listless Complains of photophobia of sound eye and pain in occipital region Has taken little nourishment on account of persistent nausea Only external compress was removed and constant pressure kept up by different members of the family Stimulants and ergot continued At 5 P M dressing removed Hemorrhage during afternoon was unabated , patient dull and listless face pale , feeble, rapid pulse , shrieking with pain, which was referred to head and right orbit Full hypodermic enabled us, after a little time, to remove the dressings It was found that greater protrusion and infiltration had resulted Nothing could be discovered of the eyelids The swelling was too great for the grasp of the outstretched hand but the oozing was as persistent as before Styptic compresses were immediately applied and pressure against the bleeding, protruding mass kept up without interruption Ligation of the common carotid was suggested, but after consultation was postponed until the following morning, as pressure seemed to control, more effectually, the bleeding Ergot, stimulants and morphia continued

Second day In spite of constantly applied compression the bleeding was profuse during the night , prostration great , pulse feeble and rapid , pain in right side of head , no increase of temperature During day condition about the same , drowsy and listless and delirious most of the time In afternoon had chill followed by fever and pains in head more severe Complains now of throbbing, pulsating pain in right orbit Examination shows that bleeding continues and that swelling is greater Cellulitis imminent Compression applied constantly

Third and fourth days after operation General condition bad , circulation feeble and fever fluctuating between 100 and 103 degrees , can take little nourishment , impossible to apply bandage owing to pain , compression kept up unintermittingly

Fifth to eighth day Cellulitis orbitæ pronounced , at several points present evidence of fluctuation , exploration with aspirator needle fails to discover pus , fever and general prostration marked , less suffering and photophobia of fellow eye Under an anesthetic the orbit was carefully explored, in the hope that a deep seated collection of pus might be found, but examination was negative , hemorrhage much less and can now be controlled by compression

Ninth day Is much brighter and delirium has disappeared , very drowsy and complains of great pain in head , ergot discontinued

Tenth to fifteenth day Swelling remains marked, but no evidence of suppuration , central mass of swelling sloughing , rigid antiseptic dressing

Fifteenth to twenty first day Swelling subsiding , border of lower lid visible and entire border sloughing , irrigation with warm 1 to 10,000 bichlorid and iodoform powder resorted to , general health improving , vertigo less pronounced

Twenty first to twenty eighth day Gradual improvement in general condition subsidence of swelling Two thirds of border of lower lid and inner one third of upper lid have undergone sphacelation , succeeded in replacing conjunctiva and lids for first time in four weeks , again close palpebral fissure

The patient was a bleeder and belongs to a family other members of which had manifested a similar tendency Only five or six months before the operation the extraction of a tooth caused him to bleed to syncope and was only arrested by firm tamponade

Case 2—J C, aged 50 confirmed glaucoma, cataracta complicata, intraocular neoplasm(?) V =0 pain excessive and constant Operation imperative to prevent possible sarcomatous infection and to relieve pain Is a feeble old man with evidences of general arterio sclerosis and senile heart

Enucleation August 26, 2 P M , anesthetic (ether) given with great caution no complications and no unusual bleeding, either during or immediately after the operation At 4 P M nurse noticed slight discoloration of bandage and applied another bandage and compress over the first no complaint, no vomiting At 7 P M Nurse after attending to wants of another patient found bandage and pillow saturated with blood, pressure with hand was applied and shortly afterward bandage removed and orbit emptied of clots and firm compression with fingers in apex and subsequent iced compresses applied with hand, patient very weak pulse feeble, under active stimulations, hot water bottles, etc , he revived and oozing continued in spite of pressure

9 P M Immediately following an attack of syncope, in spite of compression with bandage and hand, profuse bleeding again came on Hypodermics of whisky and strychnia given, patient very weak orbit was thoroughly cleaned out and all clots removed firm compress bandage reapplied over both eyes and nurse instructed to keep up constant pressure over bandage

On the following morning patient was much exhausted pale and yawning constantly complains of severe pain Hemorrhage had continued during night in spite of compresses on removing bandage the entire orbit was found infiltrated with blood, the palpebral fissure widely open and contents of orbit partially extended, the lids were swollen and edematous, attempts to arrest hemorrhage by application of artery forceps, etc , proved ineffectual The clots were again removed, compression of carotid was also made and the orbit tamponed with styptic gauze and compress applied, active supporting measures were resorted to saline draughts were given and ergot freely administered

At 3 P M Patient much weaker, face pallid, extremities cold bleeding constantly in spite of bandage and pressure with hand, compression of carotid could not be tolerated, as it increased vertigo and tendency to fainting

At 8 P M Very restless and delirious Examination showed that tampon had been forced out and infiltration of orbit much greater It was impossible to tampon, so compress of styptic gauze was applied directly and pressure kept up with relays of nurses during the night

The following morning third day after operation, bleeding less but patient excessively feeble The most active supportive measures were resorted to, hypodermically and per rectum, nausea intense

Fourth day Bandage not disturbed only slight oozing patient has no increase of temperature drowsy and dull

Fifth day Aside from great prostration no complaint, from this time on his recovery was uneventful

This patient was not a bleeder The excessive hemorrhage was probably due to general arteriosclerosis

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THE VALUE OF HOMATROPIN IN THE DIAGNOSIS OF AMETROPIA

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY EDWARD JACKSON, A M , M.D

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Its control over the ciliary muscle—In 1881, soon after its introduction, I commenced the use of homatropin hydrobromate as a cycloplegic for the determination of refraction At first it was used occasionally, then more frequently and after a year or two for the majority of cases of ametropia encountered in private practice

It was known to be less powerful than the other drugs employed for the same purpose On that account its results were always regarded with some doubt and where there seemed to be any especial uncertainty as to the findings made with it, it was followed by the instillation of one of the stronger mydriatics In 1886 I published (*Medical News*, July 24) the results obtained in these cases where the use of homatropin had been followed by one of the stronger mydriatics

"In but fifteen out of the fifty-two eyes was there any difference between the first and second results In eight of these it was one-quarter dioptric in favor of the second mydriatic, in five it was one-quarter dioptric in favor of homatropin, in one it was (in one meridian) one-half dioptric in favor of homatropin and in another the same in favor of duboisin In no case was the variation greater than may well be allowed for unavoidable inaccuracy of observation In no case was the apparent axis of the astigmatism materially changed "

Since that time the practice of following the use of homatropin by one of the slower mydriatics, in cases where the results with homatropin have seemed not entirely satisfactory, has been continued and the results obtained have not been materially different

During these fifteen years I have also been employing other mydriatics, for refraction cases in private practice to a limited extent, and for the large majority of refraction cases in dispensary work Those habitually employed were atropin, duboisin and hyoscyamin, while daturin and scopolamin have been carefully tested in a limited number of cases Comparison of homatropin cases with those subjected to other mydriatics has shown that the proportion of cases in which I failed to secure complete paralysis of accommodation with homatropin was smaller than with either of the others

Mode of application—When the above observation is compared with the relative strength of the drugs as determined by physiologic experiments (*Transactions of the Section on Ophthalmology* for 1895, page 8), there appears the paradox that the weaker drug is the more efficient cycloplegic The explanation of this is, I think, furnished in the different methods of using the drugs Schell early pointed out (*Philadelphia Medical Times*, October, 1880) that homatropin could not be used in the same way as the other mydriatics, and I have from almost the first, followed the plan of repeated instillations at short intervals A solution of from 2 to 5 per cent was used, one drop being placed on the upper margin of the cornea every five to ten minutes until four or six instillations had been made The determination of the refraction was completed within two hours of the instillations On the other hand, the other mydriatics have usually been prescribed to be instilled three times daily at the patient's home, atropin in about 1 per cent solution and the others in solutions of one half that strength Used in this way the difference in the strength of solutions, and in the efficiency of their applications have together more than counterbalanced the difference in the physiologic action of the drugs

It is hard to estimate how much a mydriatic solution loses in efficiency by imperfect instillation at the hands of the patient's family, but I have often seen cases in which the effect produced was less than one-hundredth of the effect properly to be expected In my experience, therefore, homatropin applied by the surgeon is a more reliable cycloplegic than other drugs of this class as applied at the patient's home

Notice that it is not asserted that homatropin is as reliable as other mydriatics when placed in the hands of the patient for application, and it is not asserted that homatropin is reliable unless e

There is abundant testimony in me

establish the fact that it can be so used as to be quite unreliable

In this connection it is worth while to call attention to the difference in effect secured by different methods of making the instillation The one commonly described, and I fear commonly practiced, is to draw down the lower lid and place the drop of solution within it The one that I have followed in the application of mydriatics has been to retract the upper lid, have the patient look down and place the drop on the upper margin of the cornea The involuntary rolling up of the eye that follows contact, usually causes the solution to be distributed over the cornea without any dilution Some experiments as to the comparative effect of these two methods of instillation, which I shall report more in detail elsewhere, seems to show that the latter method is about twice as efficient as the former, that is, a solution of a certain strength applied to the upper margin of the cornea in this way, will produce the same effect as a solution of double the strength dropped in the lower conjunctival sac

Another matter to be considered in this connection is the strength of solution necessary to produce complete paralysis of accommodation when efficiently employed Undoubtedly it is very much less than we have been accustomed to prescribe for home use Not that we have been in error in prescribing the stronger solutions, but that a large proportion of their strength was only needed to lessen the effects of imperfect application As bearing upon this point, attention may be called to recent reports on the usefulness of weak solutions of scopolamin Thus, Murrell (*Annals of Ophthalmology and Otology*, 1895, p 478) finds repeated instillations of a one tenth of one per cent solution of this drug efficient in suspending the accommodation

Therapeutic influence—Although not bearing directly upon the diagnosis of ametropia, a quality which should powerfully influence our choice of a mydriatic for this purpose, is the power of allaying irritation and quieting the disturbance of the ocular circulation and the reflex or remote effects proceeding from eye-strain Certainly in a very large proportion of cases of eye-strain we are justified in resorting to a mydriatic, and securing complete temporary rest of accommodation as a therapeutic measure The temporary action of homatropin would seem to make it, for this purpose, markedly inferior to the stronger and slower mydriatics I have in former years, on this account, used the latter in a considerable proportion of private cases, but this proportion has grown smaller, and such use of the slower mydriatics is now confined to the very marked cases of choroidal and retinal disease with considerable organic change The interruption of morbid action within the eye, particularly that of spasm of accommodation, is as complete with homatropin as with the other mydriatics If the instillation of the drug be made after the middle of the day, or when made earlier if one or two additional instillations be made in the latter part of the day to sustain its effect, complete abeyance of accommodation is secured until the following morning The effect of this upon such symptoms as headache, nervous tension, spasmodic closure of the lids, etc, is very marked Careful avoidance of any attempt to use the eyes on the day following the employment of homatropin will secure the benefit of the interruption of morbid action until the patient has fully recovered the power of accommodation

Here is a marked advantage over the slower mydriatics, especially atropin There is no question that with the slower mydriatics we secure as complete rest of the eye, and for a considerably longer period But this is followed by a longer period of weakened accommodative power, during which it is often very difficult, or quite impossible, to prevent the patient from making some effort, and in the eye-strain resulting from such effort much of the advantage gained by previous absolute rest is lost Unless, therefore, there are marked tissue changes which require time for their resolution, it seems to me that the therapeutic effect of homatropin is to be chosen rather than that of the slower mydriatics

Brevity of action—One of the great advantages of homatropin is the brevity of its action How great an advantage does it possess in this direction? We read of ability to use the eyes after the use of duboisin and hyoscyamin within a week, or after the use of a weak solution of scopolamin, according to Murrell, "you can safely tell your patient that he will be able to read in seventy-two hours" But this does not mean that complete recovery has occurred within that time It means that after such an interval the patient can, with undue effort and the risks of strain that have just been discussed, make some use of the eyes, while with homatropin, within the shortest period mentioned, the restoration of accommodation will usually have been complete

It is well within the facts, to state that with homatropin the usual time required for recovery is less than one half that required after hyoscyamin, duboisin or scopolamin, and less than one-third or one-fourth of the time required after the use of atropin I have seen a few cases where recovery from homatropin was quite complete within twenty-four hours, and I do not doubt that more have occurred among a larger number of patients not seen at the expiration of that time, and giving the history of recovery after such an interval In quite a large proportion the recovery is complete within forty-eight hours, and in more than 90 per cent the accommodation has entirely returned within three days This brevity of action removes the chief objection against the use of a mydriatic for the determination of ametropia, and to discuss the general question of the use of mydriatics as though atropin were the only drug of the class worth considering, is to-day very much out of date

General symptoms—Another objection to the use of mydriatics has been the possibility of symptoms of general poisoning We have all seen these general symptoms, and occasionally have found them very annoying and quite alarming to the patient's friends The patient is not usually much worried over the incoordination of thought and movement produced by one of the mydriatics There can be no question that the danger of such symptoms is less with homatropin than with any other mydriatic, used so as to be equally effective Indeed, my notes show that only about once in four hundred times was any constitutional effect noticed by the patient, although in nearly all cases there was a perceptible change in the pulse rate

The most marked case of such constitutional effects from the use of homatropin that I have seen occurred recently, in a man aged 38, suffering from headache and neuralgic pain about the eyes from low hyperopic astigmatism At the completion of the measurement of his refraction he staggered quite perceptibly in walking, and said he felt as if he had taken several drinks of whisky Reaching his place of business, his partner at once noticed the disturbance in his condition and took him into his private office, where he lay for three or four hours, at the end of which time he had recovered At the height of the intoxication there was a tingling all over the body, extending to the ends of the fingers and toes The patient was a nervous man, he expressed relief from the use of + 0 37 convex cylinder before each eye—said his eyes had not felt so rested in three years—but he gave no history of especial drug susceptibility The amount of the drug applied in this case was about 1-5 grain While the constitutional symptoms were decided they were still slight in contrast with those more frequently observed after the use of other mydriatics and doubtless could at any time have been completely removed by a small dose of morphin

Other considerations—The greater cost of homatropin, and the additional labor entailed, when the surgeon must make the applications of the drug, are important objections to its use in dispensary work, but are hardly worthy of consideration in private practice Indeed, we have found it entirely practical to use the drug in a considerable number of cases in our dispensary work at the Philadelphia Polyclinic

As to the danger of precipitating an attack of glaucoma, in an eye already upon the brink of such an outbreak, there can be no doubt that this is shared by homatropin, with the other mydriatics But its comparative feebleness and brevity of action correspondingly diminish the danger of permanent harm from such an occurrence In any case the dilatation of the pupil, which is the dangerous effect of the mydriatic, in threatened or actual glaucoma, can be promptly reduced by the use of eserin, which, in solution of one sixth strength, neutralizes the effect of homatropin And even if the increase of tension be unrecognized, the rapid diminution in the influence of the homatropin has, in reported cases, prevented permanent damage

Homatropin has been credited with the frequent production of conjunctival irritation This, I think, is an error In my experience, in some 2,000 patients I have never seen it produce the conjunctival inflammation similar to that occasionally witnessed from the use of other mydriatics But in almost every case in which it is used to secure complete paralysis of the accommodation it does cause a temporary hyperemia, involving to some extent the vessels of the conjunctiva, but more particularly those of the sclera and the pericorneal zone This hyperemia commonly disappears by the time the full effect upon accommodation has been produced, and I have never seen it last more than a few hours It is unattended by smarting or other evidence of inflammation, and seems to be of the same nature as the temporary local flushing I have pointed out as occurring after the hypodermic use of the drug (See *Med News*, July 24, 1886)

Briefly, to summarize, the points that I bring before you for discussion are

That homatropin, properly applied, is an efficient, reliable mydriatic, capable of producing complete paralysis of accommodation, and possessing the therapeutic influences for which a mydriatic is indicated in cases of eye-strain

That, as compared with other drugs of the class, it is least likely to cause general poisoning or local harm by glaucoma or conjunctival irritation, and that it entails upon the patient the shortest period of inability for eye work

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SOME INTERESTING POINTS PERTAINING TO REFRACTION

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5 8 1896

BY G C SAVAGE, M D
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It is a well known fact that the curved, colored, protective glass has the effect of a concave lens The surfaces are supposed to be parallel A short while ago, while teaching one of my private classes I decided to have the effect of such surfaces determined, both by mathematics and by the experiment of having such a glass ground Let the convex surface of such a body have a six-inch radius of curvature and the concave surface have radius of five and seven-eighths inches, the surfaces being concentric are one-eighth of an inch apart and parallel "The mathematical formula would be $(n-1)[(1-R)-(1-R')]=1-f=6[(1-5\frac{7}{8})-\frac{1}{6}]=1-f=1-0021286$, therefore f=470 inches, and the lens is divergent Hence if a plain glass is bent around a cylinder it results in an astigmatic divergent lens If bent around a sphere a symmetrical divergent lens" Since the part of the human cornea in front of the pupillary space has its two surfaces practically parallel, it can be readily seen that, if the refractive medium behind the cornea was the same as that in front, the cornea would so refract parallel rays of light as to make them divergent The index of refraction of the aqueous being almost that of the cornea, the refraction, by means of the convex surface of the cornea, is maintained by the aqueous

At the same time I concluded to have a concavo-convex lens ground, the two surfaces having the same radius of curvature and separated one-eighth of an inch in the center You can readily see by moving the glass in front of the eye, watching objects beyond, that parallel rays of light before refraction are also parallel after refraction (The rays are crowded more closely together) That is, such a glass in effect is a plain glass The mathematical formula for such a lens is $(n-1)[(1-R)-(1-R')]=1-f$, but $R=6''$ and $R'=6''$ $6(\frac{1}{6}-\frac{1}{6})=1-f=0$ $f=\propto$ parallel rays will emerge parallel Such a glass would not only serve to protect the eye from light, but would also be incapable of exciting any ciliary action The third lens is one in which the convex surface has a six-inch radius of curvature, and the concave surface has also a six-inch radius, these two surfaces are separated one fourth of an inch at center By moving the lens in front of the eye objects beyond do not appear to move, therefore its effect is that of a plain glass The mathematic formula would show that the focus of such a lens is infinity I suppose that even a wider separation of these two surfaces would still give us the effect of a plain glass

MODEL OF AN ASTIGMATIC CORNEA

This model is intended to illustrate the refraction of an astigmatic cornea The circular end represents that portion of the cornea immediately in front of the pupillary space One of the two diameters of the circle represents the meridian of least curvature while the other represents the meri f t curvature In my judgment the best way to study an astigmatic cornea is to consider it as made up of a spherical and cylindrical surface, each having its own radii of curvature There is no point of such a cornea but that extending from it are two radii, one of spherical and the other of cylindrical curvature The radii of spherical curvature in this model will all come to a common point six inches behind the circle The radii of cylindrical curvature will be in planes parallel with the plane of the meridian of greatest curvature, and the radii of each plane will converge to points in a line which is in the same plane with the meridian of least curvature The two sets of radii for the meridian of least curvature are in the same plane, while the two sets for the meridian of the greatest curvature are also in the same plane Each of these two meridians is an arc of a circle and therefore has a focus This is not true of any other corneal meridian, for the reason that all other meridians are parts of an elliptical curve If the astigmatism be vertical, and according to the rule, parallel rays of light in the horizontal plane will be so refracted by the meridian of least curvature as to be brought to a focus Parallel rays of light in the vertical plane will be so refracted by the meridian of greatest curvature as to be brought to a focus in front of the other The rays of light refracted by each of these meridians will be in the same plane after refraction as before By revolving the model so as to bring the meridian of greatest curvature to 45 degrees the horizontal meridian of such a cornea has its radii of spherical curvature necessarily in the horizontal plane If the eye be the right one, the radius of cylindrical curvature for the outer extremity of the horizontal meridian will rise above the horizontal plane, while the radius of cylindrical curvature for the inner extremity of the horizontal meridian will point below the horizontal plane Parallel rays of light in the horizontal plane will not be in the same plane after refraction as before The ray corresponding to the visual axis will pass through the cornea and will strike the yellow spot of Soemmering, not having deviated any from its original course An axial ray striking the temporal extremity of the horizontal meridian of the cornea will be bent, in obedience to the law of refraction, toward both the radius of spherical and the radius of cylindrical curvature Striking the radius of cylindrical curvature above, this ray, after refraction, rises above the horizontal plane Passing across to the nasal side of the retina it would impinge above the horizontal meridian of the retina Another axial ray, in the horizontal plane with the other two rays, striking the cornea at the left extremity of the horizontal meridian, beneath the radius of cylindrical curvature would be refracted beneath the horizontal plane Passing across to the outer part of the retina it would strike it beneath the horizontal retinal meridian These three rays of light come, one from the middle of a horizontal line and one from each extremity Connect the points of impingement on the retina by these rays and the image line must necessarily be oblique the nasal extremity of the image being above the horizontal meridian the center of the image on the yellow spot of Soemmering and therefore in the horizontal meridian, the outer extremity of the line beneath the horizontal meridian In obedience to the law of direction the object would be made to appear to incline to the same extent that the image itself inclines, therefore the object would appear to be leaning down and to the right The reverse would be the case if the meridian of greatest curvature should be at 135 degrees, the model also shows the relationship that exists between the radii of cylindrical and radii of spherical curvature for all corneal meridians In the two principal meridians they are always in the same plane In all other meridians it is not possible for them to be in the same plane It is not absolutely true that every point of an astigmatic cornea has these two radii of curvature but it is true that there is a resulting radius for every such point, or, more correctly speaking, a resultant vertical So far as the refraction is concerned, however, it is exactly the same as if every corneal point had the two radii

DISCUSSION

A W Stirling, Atlanta—Dr Savage has said that the anterior and posterior surfaces are parallel and has founded his argument on that With due respect, I submit that that is not correct The cornea increases in thickness from the center to the periphery, and when the pupil is dilated the rays of light pass through a thicker part of the cornea than when it is contracted His would be an argument against mydriatics

C M Hobby, Iowa City—The surface of the cornea is the surface of an ellipsoid of three axes, how then can we speak of radii of curvature? How can there be two radii to one curve?

B A Randall, Philadelphia—The clearness of some parts of Dr Savage's demonstration is due, unfortunately, to the neglect of some of the essential factors of the problem and the reduction of some others to too simple terms—as when he makes his so called "astigmatic curvature" no curvature at all and its "radii" parallel Were the Doctor to work out these problems in the smoke filled chamber with proper curvatures to refract actual rays of light and a screen to receive the actual results, he would be relieved of many of his misapprehensions and could turn his abilities to more profitable fields

Dr Savage, closing—In the model the two principal meridians of the astigmatic cornea are represented by straight lines, but they could have been as easily represented by curved lines What is correctly shown in the model is the radii of curvature The radii of spherical curvature all point to one common center The radii of cylindrical curvature are in planes parallel with the plane of the meridian of greatest curvature, each plane coming together in a line which is in the same plane with the meridian of least curvature and of the same length While I am sure that astigmatism can be better understood and studied in this way yet I am free to say that we have not these two sets of radii, but for every point there is a resultant radius or rather resultant vertical

CONCERNING MEDICAL EDUCATION IN THE UNITED STATES, A BRIEF HISTORY

BY FRANKLIN STAPLES, M D
WINONA MINN

In ancient times a knowledge of the art of medicine was held by its possessors as secret, membership in the order of physicians being restricted and obtained only by initiation under the conditions and in the manner prescribed In ancient Greece the right of the healing art was held by the order of the Asclepiadæ, and the Hippocratic oath, among its solemn requirements and inculcations of virtue and morality, has the following I will impart a knowedge of this art to my own sons, to those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to *no others*" In times still more remote, among the Hindus the right of the knowledge of medicine was hereditary, confined to the higher class, with physical and moral purity as requisites for initiation

In the progress of events in modern times changes have occurred Family succession and caste have ceased to be the requirements necessary for admission to the orders of the profession This would seem to be an advance, the question as to how much advancement has been in the way of virtue and professional righteousness may be considered separately

The matter of the advancement of the standard for the amount of scientific knowledge and practical ability requisite to the practice of medicine has been a troublesome one in this country for many years, but that real advancement has been made in the last decade and further improvement in the future is assured, is notable

In 1877, the year following that of our great Centennial Industrial Exposition, the general condition of things in special educational lines in this country was ably set forth in an anniversary address by an eminent professor in one of our foremost universities[1] After alluding to the evidences then shown of the country's great progress, the speaker observed "Surely candor compels us to acknowledge that in regard to many things which are essential to a lasting and elevated civilization, we are still far behindhand One common thought must be entertained, which is, that among the influences that have led to the present state of affairs, one of the most powerful has been the want of thorough special training and preparation on the part of those to whom important duties are intrusted '

This was the view expressed concerning the condition of affairs in general at the time of the observation, and the need of improvement and reform in general service It was further observed "Few persons who are at all familiar with the subject will be willing to express even the smallest satisfaction with the present state of the medical profession in this country '

The status of medical science and education, and in part the causes of the same were mentioned as follows "The ranks of the medical profession are overstocked, only a small percentage of those engaged in its practice are able to earn a living thereby, and worst of all, the profession has failed to elevate its standing and repute with the public, or to exert the powerful influence upon sanitary legislation, upon public and private hygiene, upon education and upon similar subjects, which is at once its duty and highest prerogative" This was said by eminent authority in the year 1887, and the truthfulness of the representation will hardly be denied by those who have given the subject any considerable attention

The history of medical education in the United States from colonial times to the present is voluminous, only a few facts concerning conditions and concerning causes and results may be noticed The beginning of medical colleges in this country was in Philadelphia in 1765 Dr John Morgan and Dr William Shippen, natives of Philadelphia, were the pioneer professors Both had been students of Cullen of Edinburgh, and returning to Philadelphia began the work of teaching The College of Philadelphia was formed with two professorships, which comprised all the branches, the one "Theory and Practice of Physic," held by Dr Morgan, the other, "Anatomy and Surgery," filled by Dr Shippen This College of Philadelphia afterward became the Medical Department of the University of Pennsylvania This institution is, therefore, the pioneer medical college of America

The College of New York was founded in 1767 This became King's College, now the College of Physicians and Surgeons, Medical Department of Columbia

A third chair in the Philadelphia school was formed in 1768, Dr Adam Kuhn being made the professor of materia medica and botany In the same year Dr Thomas Bond of Maryland was elected professor of clinical medicine Dr Benjamin Rush in 1769 was elected professor of chemistry These five professors constituted the faculty of medicine in the college of medicine until in 1777, when the city was occupied by the British army

The Medical Department of Harvard College was organized and lectures began in 1782, that of Dartmouth College, N H, in 1797 These four were the schools of America up to the close of the eighteenth century

The following appears as a summary of the rules adopted for admission and for examinations

1 Such students as have not taken a degree in arts must give evidence of a competent knowledge of Latin and of certain branches of natural philosophy

2 Three years after matriculation an examination for the Bachelor's degree will be allowed to students who have taken one complete course of lectures

3 One year after taking the primary degree the student will be admitted to the Doctorate if he shall be 22 years of age, shall have attended two full courses of lectures, and have published and publicly defended a treatise upon some medical subject

4 The mode of examinations shall follow that of the most celebrated universities of Europe

An announcement of the College of Philadelphia was made in 1789, signed by Benjamin Franklin as President of the Board of Trustees, and by William Smith as Provost of the College, in which the requirements for the degree of M D were somewhat extended, specifying that the candidate must have been the pupil of some respectable practitioner for the space of three years, also specifying the departments in which he must have received instruction in the college, and providing for the written or printed thesis, in Latin or English at the student's option At this time a requirement was also made for "attendance upon one course of clinical lectures, and on the practice of the Pennsylvania Hospital one year," this being the first of clinical instruction in the required curriculum

The first medical degrees conferred were of Bachelor of Medicine The first of these were granted in Philadelphia in 1768 and in New York in 1769 The first degree of Doctor of Medicine was conferred in New York in 1770 and in Philadelphia in 1771

Such, in brief, were the means of medical education and the requirements for graduation in medicine from the early colleges and for admission to the profession in the American colonies before the war of the Revolution

At the time of the beginning of the revolutionary war in 1775, the general situation is given as follows There were in the colonies about three million people, who were distributed over a vast e [illegible] f territory. It has been estimated that there were for this number of people between 3,000 and 3,500 engaged in the practice of medicine. Of these, it has been estimated that about 400 had received the degree of M. D., and that most of these were from European institutions. The Philadelphia and New York colleges had conferred fifteen medical degrees prior to the year 1776, when active operations were suspended by the progress of the war.”*

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[1] Prof William Pepper Provost University of Pennsylvania in Higher Medical Education 1877

THE FIRST MEDICAL LEGISLATION

Concerning the first laws enacted by the colonists to define the qualifications of physicians, Dr. Davis has the following in his “Contributions to the History of Medical Education”: “The general assembly of New York in 1760 ordained that ‘no person whatsoever should practice as physician or surgeon in the city of New York before he shall have been examined in physic and surgery, and approved of and admitted by one of His Majesty’s counsel, the judges of the supreme court, the king’s attorney general, and the mayor of the city of New York, for the time being, or by any three or more of them taking to their assistance for such examination such proper person or persons as they in their discretion shall see fit.’ Such candidates as were approved, received certificates conferring the right to practice physic or surgery or both throughout the whole province, and a penalty of £5 was prescribed for all violations of this law. A similar act was passed by the general assembly of New Jersey in 1772.”

The history of medical education in our country for almost the whole of the first century of our national existence may be briefly outlined as follows: As the population of the country increased and extended over the vast territory of the United States, medical colleges were rapidly multiplied. In absence of governmental restriction, control and support, teaching schools were liable to be organized with power to confer degrees wherever a few physicians were found who were desirous of forming a partnership for the business. While a few of the colleges were so located as to be able to command good talent in the corps of instructors and good facilities for clinical and laboratory work, yet with many it was otherwise. Many were either located where good facilities were not available, or were under the management of a faculty whose members were incompetent as instructors. The support of the school and the compensation of the professors were dependent upon the number of pupils. With the kind of competition incident to this state of things it was found difficult to elevate the standard of qualification necessary for admission to the medical course, or to that of a degree. A few good men representing the higher grade schools made efforts from time to time to move forward, but not always with the desired success. A notable and illustrative instance is referred to in an address in 1892 by the eminent provost of the University of Pennsylvania, who, referring to the record of the anniversary sixteen years before, and the reflections then made on the degeneracy of medical education, gave the history in words as follows: “We thought of that bitter experience in 1846, when in accordance with the earnest recommendation of the AMERICAN MEDICAL ASSOCIATION, the University of Pennsylvania bravely extended her term of study, only to find that in spite of their specious assurances not a single one of her rivals emulated her courage, so that after six discouraging years of steadily diminishing classes, she sorrowfully abandoned her advanced position. We thought, too, alas! of the long and painful controversy lasting almost five years over the proposition to again elevate our standard of medical education, and of how the end had been attained only at the cost of old friendships and of the allegiance of valued associates whose convictions remained as to the injury that would be worked to the university by the proposed advance.” This was said by the learned professor with reference to experience in the past, in full view of a far better state of things at the then present, and of still better prospects for the future which is now at hand. General and professional public opinion has been slow in coming to its present understanding and position.

The more important causes of the slow progress in medical education, with suggestions for their removal, the diagnosis, a little of the pathology and indications for treatment, are contained in the following words of President Eliot of Harvard University, said in an address, I think, in 1892, and published in the *British Medical Journal*. The points made were as follows: 1, that it is a clear disadvantage in medical education that the degrees given by the faculty, a teaching faculty, should admit to membership in the profession and so to the legal right to practice medicine; 2, that the standard for membership, giving right to practice, should be made by law outside the teaching powers.

President Eliot further observes: “The salary of a full professor in the medical school is lower than in any other department of the university.” This, he thinks, is not as it should be and speaks of it as our English inheritance. He says: “From England we have inherited a lower standard of general education in the medical profession, a lower standard for admission to that profession and a lower standard of training for the entering upon the duty of medicine. On the continent they do things far better, and it is to be regretted that we have not substituted the continental for the English standard.”

This was from the eminent president of Harvard in 1892. His conclusions and practical suggestions were summed up as follows: “We have obtained for the medical profession a higher standard in the community, but we have still to make proper the standard of preliminary requirement for admission to the medical schools, so that they may be equal to the schools of law and theology.”

THE SLOW PROGRESS

During most of the long period since the beginning in colonial days and until quite recent years, no enlargement of requirements in studies and time were made by the schools. This the most of us now in practice know from our own observation. Comparing the curricula of comparatively recent years with those of the early times, we see but little difference. Moreover, the competition instituted and maintained especially by the lower grade of schools, effectually rendered null some of the requirements that were effective in the beginning. This was seen, for instance, in the total disregard for any standard of qualification for admission to the college. An unavoidable evil existed in the fact, that a diploma from the school of the lower grade was just as good, legally, as that obtained at greater expense and better application at the higher institution.

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* Contributions to the History of Medical Education and Medical Institutions in the U. S. 1776–1876, by N. S. Davis, M. D., LL. D.

This condition of things in free America causes the United States to be the nation with the largest proportion of physicians and of medical colleges to the number of inhabitants, of any in the world[3]

It is not asserted here that continual progress has not been made in this as in other countries in the arts and sciences pertaining to medicine The reverse is known to be true, and the discoveries and inventions of the period have been an important means in promoting the more recent advancement in the higher medical education

The following language of a late professor in Harvard University is expressive of the truth

"It is not an extravagant assertion to say that in all this turmoil, change and progress, medicine has kept abreast of the other natural sciences, of politics, and of theology, and has made equal conquests over authority, error and tradition If this statement seems extravagant, it is to be recollected that the brilliant discoveries in natural sciences and the arts, the great political changes, and the vacillations of long established faiths to which we have referred, influence so obviously the fate of nations and the aspects of civilization, that they force themselves prominently upon our attention, while the progress of medicine is silent and unobserved Yet the progress and changes of the latter are not less real than those of the former, and, perhaps, affect more profoundly than they the development of civilization and the welfare of the human race During the past century, medicine has been enfranchised from superstition, quasi-charlatanism, bald empiricism and speculation, and has developed into a symmetric science, affiliated with the other natural sciences, studied by the same methods and the same appliances as they are, and, like them, has been planted upon the solid basis of facts and demonstration, pathologic anatomy, starting from the "de Sedibus" of Morgagni and the labors of Baillie, and illustrated by the later researches of Rokitansky and others, has become a fundamental branch of medical science, obstetrics, rescued from the hands of ignorant midwives, has been raised with its allied branch, gynecology, to its legitimate position as a science, preventive medicine and hygiene, cultivated to an extent previously unknown, have prolonged the average of human life, organic and physiologic chemistry have been substantially created, and achieved important and brilliant results, physiology has grappled with the abstrusest problems of the structure of life, and has revealed so much as to make timid people tremble at the audacity of its efforts"[4]

This was said in the year 1876 The great discoveries and advances in scientific research since that time, especially in bacteriology, asepsis, antiseptic means, the modern possibilities in operative surgery, and in the great field of preventive medicine, are not unknown to us

STATE LEGISLATION AND ITS RESULTS

The State of Illinois has the credit of first establishing by law a standard of requirements for practice in the State

In June, 1880, the Illinois State Board of Health appointed a committee to formulate a scheme of educational requirements and characteristics by which to determine the good standing of medical colleges This step was taken in order to enable the Board the better to discharge the duty devolved upon it by the act to regulate the practice of medicine in the State of Illinois, and by which act the Board is directed to "issue certificates (entitling to practice) to all who furnish satisfactory proof of having received diplomas or licenses from legally chartered medical institutions in good standing" A schedule was prepared by the committee, and subsequently formally adopted by the Board, as the standard entitling to recognition as the basis for legal qualification for practice in Illinois

The first act regulating the practice of medicine in the State of Minnesota became operative in March, 1883 It was the form of legislation in force in Illinois Five years later this law gave place to the present law, which requires an examination by the State Board of all persons commencing the practice of medicine in the State, and, as now amended, the minimum requirements demand that all graduates of later date than 1898, furnish evidence of having attended at least four courses of lectures in different years, of not less than six months each Other States have enacted laws with similar requirements, and so large a number of the States of the Union now have medical practice acts, defining the requirements for admission to practice in the respective States, that such medical schools as would otherwise refuse to advance, must be compelled to come up to the higher standard or go out of the business This movement shown in the passage of state laws to such an extent throughout the country, is ominous in that it speaks of advance in public opinion and knowledge in scientific matters It is this that has made state medicine what it now is in this country

With the educational prospects which we now have, with the present advanced pathology, with our able teachers thereof in the medical schools, laboratories and hospitals, in Philadelphia, Baltimore, New York, Boston and Chicago, with the world's present knowledge of the means and importance of cleanliness in medicine and surgery, and with our rapidly increasing knowledge of the means of prevention of disease in the land, as medical men we are able to rejoice in the present and hope well for the future

The literature of medical history and medical education is important The English writer, Dr Edward Berdoe, speaks of the works of Sprengel, Hasser, Baas, Puschmann, and observes, that "many others of the same class sustain the claim that Germany has created the history of medicine, while the well known but incomplete treatise of LeClerc shows what a great French writer could do to make this *terra incognita* interesting" Of English writers, we have the works of Drs Berdoe and Withington, and other English contributions in special departments In this country are published the works of Joh Hermann Baas, translated into English by Dr H E Handerson of Cleveland, Ohio, and the "History of Medicine from the Earliest Ages to the Nineteenth Century," by Robley Dunglison, is still extant

"Contributions to the Annals of Medical Progress and Medical Education in the United States, before and during the War of Independence, by Joseph M Toner, M D, was published in 1874 "History of American Medical Literature,' an address by Samuel D Gross, M D appeared in 1875 "Contributions to the History of Medical Education and Medical Institutions in the United States of America, 1776-1876, by Nathan S Davis M D, in 1877 "Medical Education, Extracts from Lectures before the Johns Hopkins University, 1877-78," by John S Billings, M D, in 1878

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[3] Statistics in Higher Medical Education' by William Pepper

[4] A Century of American Medicine 1776 1876 by Edward H Clarke M D A A S—Harvard

Beside, many anniversary addresses at college commencements and before learned societies have from time to time made additions to the literature of medical education in this country What is done in the medical and surgical practice of to day, is recorded in our hospital reports, in medical journal correspondence and in the practical works of American authors

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RACHITIC CHEST DEFORMITY IN TWINS, WITH EXHIBITION OF CASTS

Presented in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association, held at Atlanta Ga May 5-8 1896

BY W J BELL, M D

EX ASSISTANT RESIDENT PHYSICIAN OF NEW YORK INFANT ASYLUM
ATLANTA GA

These cases are presented because they are unique They were twins, the mother being a hunchback The deformity is very nearly alike in the twins They died of atelectasis and pneumonia at the age of fifteen months In the case of Sarah Coy, we found a small strip of lung tissue on the left side, the other being of an atelectic character The other lung was slightly encroached upon This child just previous to death weighed eight and one-quarter pounds Its breathing in best physical condition was eighty to ninety per minute, and the respiration during the last illness ran up as high as one hundred and twenty per minute, practically panting A line drawn through the chest, directly from the central portion of the sternum, would have pierced the inner angle of the cartilages of the ribs as they were bent in, in each case The other case is of a boy, weight seven and one half pounds at the time of death The two cases were almost exactly parallel They were each subject to frequent bronchial attacks The respiration in the boy was a little more rapid than in the other, the last illness gave a respiration that could hardly be counted

Dr BYERS—How about the limbs?

Answer There were some evidences of rickets about joints The head of the girl showed a slight rachitic square shape, and the sutures were only partially closed

Question Was the chest born that way?

Answer It was slightly deformed I did not see the children until about the third month and there was a slight sinking in at that time, which seemingly increased until their death

Question Is there any such thing as congenital rickets? Have you noticed such a thing?

Answer I have heard reports of such cases, but never saw a case These cases occurred in the New York Infant Asylum I made molds for these casts over the bodies of the children, so they are exact reproductions of the chest

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SOCIETY PROCEEDINGS

Southern Surgical and Gynecological Association

Abstract of the Proceedings of the Ninth Annual Meeting, held in Nashville, Tenn, Nov 10-12, 1896

FIRST DAY—MORNING SESSION

The association met in the auditorium of the Nicholson House, and was called to order by the President, Dr E S LEWIS of New Orleans, La

An Address of Welcome was delivered by the Hon JOHN BELL KEEBLE of Nashville, which was responded to by President LEWIS

There were fifteen new members elected, after which the reading of papers was proceeded with

The first paper was read by Dr W D HAGGARD, Jr, of Nashville, Tenn, entitled

VAGINAL VERSUS ABDOMINAL SECTION FOR PUS IN THE PELVIS

He recounted the transitional periods in the treatment of pus in the pelvis Vaginal puncture superseded by abdominal section and removal of pyosalpinx, total uterine castration per vaginam by the French and through the abdomen by the American school They have reluctantly given way to modern vaginal section and evacuation and drainage of all pus pockets It is a distinctly American innovation and will revolutionize the results in pus disease The abdominal route affords visual inspection of the field The attack on morbid masses can be made with safety to visceral integrity If pus accumulations are multiple, rupture and peritoneal soiling are inevitable, that is the supreme disadvantage of abdominal incision He had often seen the pelvis deluged with pus with impunity He had also seen patients die within twelve hours from fulminant sepsis, from peritoneal contamination The cases perishing from sepsis on the third day are classical There is no way of distinguishing these cases clinically All should be regarded as virulent The writer referred to a mortality of 18 5 per cent in a series of collected cases of laparotomy for pus, done in five metropolitan hospitals in the last year, and asked what must it be in the "unheard from precincts" and in the hands of the great unwashed? The abdominal method offers the best approach in tubercular inflammation of the ovaries and tubes and in small unilateral pus tubes

The author referred to the advantages of exploring the pelvis for retro uterine tumors, inflammatory, and adnexa by vaginal section The geography of pus in the pelvis in most cases makes vaginal incision extraperitoneal, a minor procedure giving major results, no shock, no risk, no disturbance in convalescence Patients will submit to it who will refuse more formidable procedures We can change the methods, but we can not change the patient In prolonged sepsis from huge abscesses posterior section and drainage are a life saving procedure The special indications are in 1, early cases of acute suppurating salpingitis, 2, incipient post puerperal peritonitis, 3, large pyosalpinx and true pelvic abscess The first group includes early gonorrheal and abortion cases The essayist had incised a tense tube and let out serous fluid and curetted a gonorrheal case of a month's standing with pain temperature and tenderness for three days The opposite tube was normal In a week that tube became similarly affected and was similarly treated He believed those serous effusions in the Fallopian tube were the preceding pathologic condition to pyosalpinx If this be true and is the embryonal history of suppurating salpingitis in early gonorrheal and other inflammatory cases the prophylactic value of vaginal section will be the greatest boon yet given to infected woman In puerperal cases, incipient peritonitis and puddles of pus in Douglas' space imperatively demand incision Should simple pus letting in any of these cases not effect a cure, subsequent operation for removal of the relics of previous ravages can be done without the dangers incurred in the presence of pus The field of vaginal section is to prevent suppuration in early cases, to anticipate it in puerperal cases and to save life in desperate cases It is simple, surgical and safe Its application to the pelvic inflammatory processes and to pus in the pelvis is one of the greatest surgical triumphs of the age

Dr JOSEPH TABER JOHNSON of Washington, D C, said that while the vaginal method had a great many points in its favor and was being resorted to more and more in cases of large pus collections in the pelvis, yet those who had been familiar for a considerable time with the abdominal route could operate more conveniently and dextrously by this method and with greater safety to the patient than by the vaginal method He could not agree with the speaker that the vaginal operation may be done without any risk or damage to the patient Sometimes in operating through the vagina for the purpose of removing the uterus and its adnexa, or for large pus collections high up in the pelvis, where it is necessary to manipulate the parts a good deal and to do a thorough enucleation, the surgeon was likely to tear the intestines, the bladder, the ureter, or rupture a large vessel which is out of sight In such cases the abdominal is much safer than the vaginal route However, the vaginal method had much to commend it in cases of pus collections that are low down in the pelvis

Dr CHARLES P NOBLE of Philadelphia believes we should practice a judicious eclecticism He did not feel that either the abdominal or the vaginal method possessed all the advantages, but if restricted to one or the other he should choose the abdominal rather than the vaginal route An objection form erly urged against the abdominal route was the large per cent of hernias which followed this method Only a week since he had tabulated the operations he had done for four years, which amounted to 397 abdominal cases, in which he had used the buried suture in closing the abdominal wound Of this number seven of the wounds suppurated, while 390 healed by primary union Of the seven which suppurated, one had a hernia Of the 390 cases, one had a large umbilical hernia Aside from these two cases he has not had any hernias in his operative work for the last four years, particularly where the buried suture was used If the patient is in a condition to permit the surgeon to do ideal work, the question of hernia was such an insignificant one that it might be left out of consideration The matter of hernia following abdominal operations was one of the stock arguments against the abdominal method The next objection raised against the abdominal method was the great amount of shock as compared with the vaginal His experience has been that unless the gynecologist operates on the desperately bad cases, shock played a small rôle in abdominal work In short, he had had more shock following vaginal than abdominal operations

Dr **Howard A Kelly** of Baltimore said that, whenever possible, pus in the pelvis should be treated by vaginal puncture or section posterior to the cervix, without sacrificing any of the uterine appendages A large percentage of the cases thus treated would have no future discomforts Illustrative cases were cited One of the principal arguments advanced by advocates of the vaginal route in removing the uterus, tubes and ovaries was the excellent drainage that could be secured by this method In Dr Kelly's opinion it is unnecessary to take out the uterus to get drainage By making an incision posterior to the cervix and breaking up adhesions free drainage could be established

Dr **L S McMurtry** of Louisville said a deep impression had been made upon the profession in the last few years by the vaginal method of operating for pus in the pelvis The procedure, however, was by no means a new one, but had simply passed out of the minds of the profession of this country for a time, it having been superseded by the abdominal method, but had been recently revived Battey, in his original operations upon the ovaries, attacked the pelvic organs through the vault of the vagina The method of attacking accumulations of pus in the pelvis by vaginal puncture and drainage, practiced by Kelly as far back as 1889, was the universal practice of abdominal surgeons for a long time The sacrifice of the uterus in the majority of cases of suppurative pelvic inflammation was unnecessary While there were undoubtedly puerperal cases with suppurative pelvic inflammation, where it was necessary to remove the uterus, it was not so to such an extent as to make it a rule that this organ should be taken out Surgery should be confined within the limits of removing only such diseased tissue or organs as are necessary for the complete cure and restoration of the patient

Dr **J Wesley Bovee** of Washington, D C , objected to anterior colpotomy in dealing with pus cases, unless the accumulation of pus was on top and in front of the bladder He thought these cases could not be drained through the anterior vaginal route, and the pus could not be reached in many cases He believes it is not necessary to remove the uterus at the same time pus tubes are taken out He had seen cases where there was an abscess of the ovary an abscess of the Fallopian tube and another alongside of each ovary with three separate cavities on one side By draining one a large quantity of pus could be evacuated and perhaps in some cases this would be all that was required He did not want to be understood however, as being opposed to the vaginal route in very urgent cases

Dr **R B Maury**, of Memphis, had during the last two years, made it his duty to thoroughly study the subject of vaginal hysterectomy as he had done quite a number of these operations without any mortality, without any accident, or unpleasant results But he would not undertake to say that we ought to substitute it for laparotomy Both abdominal and vaginal hysterectomy were operative measures that surgeons must avail themselves of according to the circumstances of the case Dr Maury then cited the histories of two cases that he had treated within the last 30 days, which beautifully illustrated the advantages of the two methods

Dr **W E B Davis**, of Birmingham, Ala , said the practice of incising pelvic abscesses was so old that it hardly required discussion, but the method of attacking pus tubes by vaginal section was comparatively recent Unquestionably vaginal incision for pus confined to the tubes and ovaries would save these important organs in a good proportion of cases In all cases of large pus collections in the pelvis, nothing should be done more than to incise the abscess and drain, and then later on the surgeon should be prepared to do an abdominal section if necessary, but he would rarely find occasion to do this Total ablation of the uterus and its adnexa was unnecessary in many instances in which it was practiced by some surgeons

CHOLELITHIASIS

A paper on this subject was contributed by Dr **A M Cartledge**, of Louisville, in which the author reported several interesting cases He dwelt upon cholecystostomy and cholecystenterostomy, pointing out the indications for each operation He considered cholecystostomy as the only operation applicable to the cases cited In his opinion there were no cases that primarily demanded cholecystenterostomy He was not prepared to say that cholecystenterostomy with the use of the Murphy button was good surgery, nor that the button was free from danger

Dr **James McFadden Gaston**, of Atlanta, agreed with the essayist that in ordinary cases of gallstones in the gall bladder with obstruction of the cystic duct, the simplest procedure was to lay open the abdominal wall, attach the gall bladder to the incision, and remove the gallstones But in a large proportion of cases of complete obstruction he doubted whether there would be restoration of bile through the cystic duct into the gall bladder Relative to the comparative value of cholecystostomy and cholecystenterostomy, the two operations were applicable to entirely different conditions No one would operate and expect benefit from a cholecystostomy except to establish drainage for the bile in a case of permanent occlusion of the common duct, and this was the only condition in which the advocates of cholecystenterostomy had ever claimed anything for it

Dr **John D S Davis**, of Birmingham, emphasized the point that patients frequently have gallstones without symptoms, more particularly jaundice He does not believe that it is ever wise to resort to cholecystenterostomy as a primary procedure The surgeon should first resort to drainage, and then if relaxation does not take place and the flow of bile is not affected, a cholecystenterostomy should be done

Dr **George Ben Johnston**, of Richmond, Va , spoke of the diagnosis of gallstones He is convinced that if examinations of suspected cases of gallstones were as careful and minute as they should be, surgeons would frequently find them It has been his experience that enlargement of the gall bladder does not always occur where a gallstone exists, but that a condition which simulates enlargement of the gall bladder frequently does exist, this condition being due to the presence of numerous dense adhesions found in the neighborhood of the gall bladder, gluing it to every tissue with which it comes in contact One thing which struck him as very singular in connection with the presence of gallstones was that the size of the stone or stones seems to make no difference in the production of symptoms In regard to hemorrhage, it is generally admitted that in cases in which cholemia is profound, they are the ones in which we are to expect hemorrhage and by no known method can this hemorrhage be successfully [illegible] The cholemic condition seems to invite a fatal hemorrhage [illegible] experience of operators in this field of surgery is that [illegible] cholemia is profound, hemorrhage of a fatal character is [illegible] expected He considers cholecystostomy a better p[illegible] in all cases, except in those where the obstruction is [illegible] common duct and can not be relieved

Dr **W E B Davis** of Birmingham, said surgery [illegible] bladder for the removal of gallstones [illegible] results, but there were still questions in regard t[illegible] procedures on the ducts that were not [illegible] He did not believe the essayist referred [illegible] being the choice of operation in a [illegible] of the duct could not be removed [illegible] mind the procedure advocated [illegible] operation in a case of stone in [illegible] was no obstruction in the duct [illegible] tenterostomy instead of [illegible] essayist did not intend to [illegible] do a cholecystenterostom[illegible] could not be removed. [illegible] upon Perhaps in [illegible] is the obstruction found [illegible] ago the author made [illegible] that the surgeon [illegible] without periton[illegible] subject was read [illegible] CIATION in 18[illegible] mental op[illegible] the stone [illegible] cases [illegible] eventu[illegible] resorted [illegible] did n[illegible]

Dr George A Baxter of Chattanooga, directed attention to the frequency of gallstones unattended with the ordinary symptoms of pain or colic, and cited an illustrative case in which there were found, postmortem, three large stones in the gall bladder

Dr F W McRae of Atlanta, cited a case in which there were repeated attacks of colic with profound cholemia An operation was undertaken with the idea that the obstruction was in the common duct, and that there were stones in the gall bladder On opening the abdomen in the presence of several physicians he found the liver much enlarged and reaching almost to the umbilicus, but instead of finding the gall bladder enlarged, he found a fibrous cord not larger than his index finger The common duct from disuse was reduced to a mere cord A calculus was found in the hepatic duct, extending up into the transverse fissure of the liver He did not know what to do for a case like this, and after consultation with his colleagues closed the abdomen The patient died five days later from exhaustion If anything could be done for such patients he would like to know it

First Day—Afternoon Session

Dr John T Wilson of Sherman, Texas, read a paper entitled

MENTAL COMPLICATIONS FOLLOWING SURGICAL OPERATIONS

The subject of mental disorders produced by or following surgical operations has not been discussed to any great extent, and until within the past few years only a passing notice was given it It is a strange fact that while surgical operations will sometimes cause serious mental disturbance, on the other hand these same operations will sometimes cure them, especially is this the case with some melancholiacs Many females laboring under attacks of melancholia caused by some disease of the genital apparatus, have been cured when relieved of the physical defect by operation, others have been much improved, and yet some have received no benefit The question may very properly be asked why a surgical operation should produce an attack of insanity This can no more be answered in every case satisfactorily than can the question why some persons become insane from the many other causes to which it is attributed, for in most cases these mental complications are a surprise and no good reason can be given why they should follow In others, however, a logical explanation might be had If the patient is a high strung, nervous individual, easily excited, unable to bear pain, the great and increasing dread of the anesthetic, the operation, or both, will so affect him that he will lose control of the will power and the explosion will come after the operation and reaction from the anesthetic In many of these cases, probably a majority, there is an hereditary taint or a strong neurotic tendency

The author quoted Mairet who thinks, 1, that it is in those individuals who are predisposed by heredity or other grave causes—alcoholism, infectious diseases, etc, that surgical operations give rise to insanity, 2, in the constituent elements of an operation that might act on the brain were two most important ones, namely, the anesthetic and the degree of surgical traumatism with its after effects, of which disturbed nutrition plays a very important part 3, when predisposition also is considerable the anesthetic alone may produce insanity, or it may result even after minor operations It is necessary to take into consideration the mental state of the patient prior to the operation, especially in those graver ones where questions of life or death are frequently involved

Dr E S Lewis of New Orleans related the case of a woman, 40 years of age, very hysteric, upon whom he had operated for laceration of the perineum She had manifested no evidences of insanity prior to operative interference, but during convalescence the hysteric manifestations increased and were associated with delusions Her condition became so serious that on different occasions she threatened to commit suicide She was transferred to an insane asylum and after a thorough examination by the physician in charge an unfavorable prognosis was given Investigation of the family history showed traces of insanity

In another case a woman 60 years of age, he removed a very large adherent ovarian tumor The operation was attended with considerable shock For a few days subsequently the patient did very well, had no fever during convalescence, but she later became perfectly insane These were the only two cases he vividly remembered, although he had seen cases of temporary insanity after operations which had passed off in the course of a few months

Dr W E Parker of New Orleans had seen two or three cases of insanity in men following surgical operations, but had never been able to trace any history of insanity in the family The insanity occurred in alcoholic cases Two of the men either took cocain or morphin In the management of such cases the particular drug to which the patient was addicted should still be continued in very small doses, being cut off gradually, not suddenly, as great prostration often follows the interdiction of a habit that has continued for a number of years

Dr R B Rhett of Charleston, S C, had met with three cases of post operative mental aberration The mental aberration occurred in two old women after removal of the breast for cancer A third case occurred in a young woman who had had puerperal insanity prior to operation In two instances the insanity lasted for three days, in the other three weeks

Dr A M Cartledge of Louisville said the question of post operative insanity led us to discriminate as to the probable etiology in many of the cases He thought the author of the paper had in mind to deal with those cases of post operative insanity supposed to be more or less functional in character, rather than those suffering from the mental impression produced by the operation in general He was quite sure most of the cases, except those characterized by hereditary tendencies and traits, could be traced to some organic lesions The history of the case should always be thoroughly investigated He had only encountered what he considers pure post operative insanity in two cases One patient had been in an insane asylum four years previous to operation and had developed subsequently a pus tube Just before operation the patient seemed perfectly rational, but on the third day thereafter a violent mania developed which terminated fatally The other case of insanity occurred in an unmarried woman, 38 years old, from whom he had removed an ovarian cyst

Dr John D S Davis considered the matter interesting from a medico legal aspect No surgeon was absolutely free from such mental complications occurring in his operative work He had encountered four cases In one case, a young man, there was no history of insanity, but an analysis of the urine showed a great many casts and a slight trace of albumin before operation Operative interference was followed by acute mania which lasted seven days, then disappeared, and the patient recovered He would like the essayist, in closing, to touch upon the responsibility of the surgeon in this class of cases

Dr Joseph Taber Johnson said that in talking with Drs Kelly and Noble, he learned that the latter had met with eight cases of insanity following operations upon the perineum He asked the essayist to state whether perineal operations were more frequently followed by insanity than others

Dr Wilson had seen a number of cases of various forms of insanity following surgical operations, but does not think the disease occurs more frequently after operations upon the perineum and genitalia than any other part of the body In answer to Dr Davis' question, he does not think the physician is any more responsible for the death of a patient from insanity following an operation than he is for death following any other operation He had never heard of a suit of malpractice being brought against a practitioner for a case of mental derangement from a surgical operation

Dr George Ben Johnston of Richmond, Va, followed with a paper on

SPLITTING THE CAPSULE FOR THE RELIEF OF NEPHRALGIA

He drew the following conclusions 1 Nephralgia is not always associated with a demonstrable lesion 2 When other evidences of kidney disease are wanting the pain is due to a too tight capsule 3 Nephralgia may and frequently does simulate symptoms of gross tissue changes or mechanical irritants 4 Where severe and persistent pain in the kidney exists without other evidences of renal disease, exploratory operation is indicated 5 When inspection, palpation and needle puncture fail to disclose a condition sufficient to account for the pain, the capsule should be freely opened

URETERO URETERAL ANASTOMOSIS

Dr J Wesley Bovee of Washington, D C, read a paper on this subject and reported an interesting case The author dwelt at length upon the literature of the subject, quoting from the contributions to the surgery of the ureters by Van Hook, Fenger, Kelly and Cabot in this country, and the classical work of Glantenay, Liaudet, Tuffier and others in Europe He drew the following conclusions 1 Uretero ureteral anastomosis is a perfectly feasible procedure 2 Uretero ureteral anastomosis, whenever possible, is far preferable to any other form of ureteral grafting, to nephrectomy and to ligation of the ureter 3 It should be done preferably by lateral implantation or by oblique end to end anastomosis, though the transverse end to end, or the end in end methods may be safely employed 4 That constrictions of the caliber of the ureter do not usually follow attempts at suturing in closure of com plete transverse section of the duct 5 That nephrectomy for transverse injuries of the ureter *per se* is an unjustifiable operation 6 That simple ligation of the ureter to produce extinction of the function of the kidney is too uncertain to justify its practice 7 That drainage is not necessary if the wound be perfectly closed and the tissues throughout are aseptic

Dr **Howard A Kelly** was very much interested in this subject and said every abdominal surgeon should be familiar with uretero cystostomy or uretero ureteral anastomosis, because in doing abdominal operations the surgeon was liable at any time to injure the ureter, when he would be confronted with the necessity of doing something to repair it Dr Kelly then pointed out the various ways in which the ureter might be cut during operations and described the method he pursues in repairing such injuries

Dr **Charles P Noble** cited a case of neglected extra uterine pregnancy complicated with an intra ligamentous ovarian tumor In operating, the intestines were apparently adherent over a mass of blood and a large fleshy adhesion ran up on it To save time this was clamped, cut through and the pelvis cleaned out It was necessary to do a hysterectomy in order to get anything to tie as the anatomic landmarks were obliterated on both sides of the pelvis Furthermore, the broad ligaments did not come down in the usual way When the operation was completed the patient was in collapse, and it was found that what was supposed to have been a fleshy adhesion was really the ureter and thickened peritoneum The ureter was cut off almost up to the kidney itself The lower part of the ureter was taken out with the mass of blood, there being only the upper three or four inches of the ureter left Had any attempt been made to prolong the operation with the patient in collapse, death would have resulted Although the ureter was short, it was dragged up into the upper end of the abdominal incision It was impossible to do a uretero ureteral anastomosis, likewise to switch the ureter into the bladder, because it did not reach anywhere near the brim of the pelvis, much less the bladder, and there was nothing else to do but to remove the kidney, which Dr Noble did, and the patient recovered

(*To be continued*)

SELECTIONS

Maragliano's Sero Therapeutics of Tuberculosis —The *Gazzetta degli Osp e delle Clin* , of October 18 and 20, contains Maragliano's latest report The number of cases treated is more than 712, but he includes only those of which he has personal knowledge And first he announces that the harmlessness of the serum treatment is now established beyond question The occasional transient cutaneous and thermal disturbances are trifling, and the rare instances of vasomotor phenomena, resembling angina pectoris (nine cases in all), are also transient and without after consequences, although he partially suspends the treatment when they occur He states that the gravity of the disease is not determined by the length of time that has elapsed since its first appearance, but by the presence of fever and emaciation, as these are manifestations of toxemia, and this is a much more serious condition in tuberculosis than local lesions If this is appreciated the benefits of sero therapeutics will be more justly understood He also adds that the persistence of the area of dullness is an evidence of cure and not of the reverse, as many suppose This dullness is the result of sclerotic processes which are conservative and healing If patients would apply for help in the early stages of the disease, when the organism is able to cooperate more effectually with the treatment, the cures would be much more numerous, but such cases are rare indeed

The therapeutic value of the serum treatment is brilliantly manifested by the statistics which include all the bad as well as the favorable cases, as he emphasizes again and again He admits that there were cases, and not a few, in which the results were negative, and the disease continued its course to a fatal termination in spite of the serum, but they only serve to enhance the benefits derived from it in the numerous other cases in which its curative effect on the principal morbid phenomena of the disease was unmistakable and permanent up to date

At present the final permanence of the cure has still to be established, which time alone will tell The effect of the treatment on the fever is slow and gradual Where it persists in spite of the serum, it has been his experience that there was always some active microbic complication He reports that the fever disappeared in 285 out of the 524 cases with fever These include all stages of tuberculosis

In 62 85 per cent of the cases, the patients gained in weight, two gained 20 kilograms In this connection he emphasizes again that the benefits do not depend on the amount of serum injected at a time, but on the regularity and long continuance of the treatment

The broncho pneumonic foci entirely disappeared in 25 per cent of the total number of patients, the percentage diminishing with the increasing severity of the disease, from 85 per cent in the circumscribed apyretic form downward The bacilli disappeared completely from the sputa in 33 per cent

He has also personally cured three cases of cutaneous tuberlosis, and one case of tuberculosis of the kidneys He refers briefly to similar cures made by others, but does not include them in his report, among them a tuberculous anal fistula, reported cured by topic applications of the serum The best results are obtained with small, regular, persistent doses of one c c every other day although some cases required more (Moggi and Regnier used 10 c c at each injection)

His usual method is by hypodermic injections, but he has obtained the same result with rectal injections of 10 to 20 c c He has also tried administering the serum by the mouth, but has not had sufficient experience with this method to formulate an opinion at present One of his earliest patients apparently cured, has relapsed, but a second course of treatment has again caused the disappearance of all the symptoms Out of the 114 earliest patients in the most advanced stages who showed marked improvement, 14 have relapsed and died since, and 6 others are in a serious condition The rest are all doing well

He classifies his 712 cases as follows

1 Destructive broncho pulmonitis with cavities, 168 cases With fever, 129 Fever disappeared in 55, attenuated in 22, stationary in 52 Sputa examined and bacilli found in 59 Bacilli disappeared in 10, diminished in 27, stationary in 19, increased in 3 Weight measured in 129 cases, increased in 75, stationary in 38, diminished in 16 The positive results in the 168 patients in this category were Apparently cured, 14, marked improvement, 75, stationary, 50 disease progressed, 29

2 Destructive broncho pulmonitis without evidences of cavities, but with microbic complications, 127 cases With fever, 94 Fever disappeared in 54, attenuated in 15, stationary in 25 Bacilli in sputa in 52 Bacilli disappeared in 13 diminished in 27, stationary in 12 Weight measured in 113, increased 74, stationary 35, diminished in 4 Positive results in the 127 patients in this category were Apparently cured, 12, marked improvement, 71 stationary 35, disease progressed, 9

3 Diffuse febrile broncho pulmonitis with or without destruction of tissue, 220 cases Fever disappeared in 107 diminished in 37, stationary in 60, increased in 16 Bacilli in sputa in 81 Bacilli disappeared in 13, diminished in 53, stationary in 12 increased in 3 Weight measured in 151 cases, increased in 90 stationary in 49 diminished in 12 Positive results in the 220 cases in this category were Apparently cured, 10 marked improvement, 121, stationary, 67, disease progressed, 22

4 Diffuse apyretic broncho pulmonitis, with or without destruction of tissue Bacilli in sputa in 17 Bacilli disappeared in 7, diminished in 9 stationary in 1 Weig
ured in 58 increased in 43, [illegible] Posit

in the 68 patients in this category Apparently cured, 2, marked improvement, 54, stationary, 12

5 Circumscribed febrile broncho pulmonitis, 81 cases Fever disappeared in 69, diminished in 7, stationary in 4, increased 1 Bacilli in sputa in 44 cases Bacilli disappeared in 27, diminished in 16, stationary in 1 Positive results in the 81 patients in this category Apparently cured, 33, marked improvement, 45, stationary, 3

6 Apyretic circumscribed broncho pulmonitis, 48 cases Bacilli in sputa, 36 Bacilli disappeared in 33, diminished in 3 Weight measured in 45 Weight increased in 44, stationary in 1 Positive results in the 48 patients in this category Apparently cured, 33, marked improvement, 13, stationary, 2

The Influence of the Jews on Medicine – Dr Richard Landau in his *Geschichte der Jüdischen Aerzte* has traced the course of medicine among the Hebrews from the time of Moses, their great law giver, claiming the latter as a member of the medical profession, in the highest and best sense, on the ground that he was a sanitarian, and thence onward through Solomon, Elisha, Isaiah, Ezekiel and Jesus the son of Sirach, to the Essenes, whose Aramaic root name shows that they at first professed medicine, though the sect soon became lost in mysticism It was not until the first century of our present era, however, that the really great school of Jewish physicians began with Akiba and Ismael, followed by Hanina about the year 200 Hanina was contemporary with Samuel, the great oculist and even greater accoucheur, whose collyrium was long a formula throughout the then known world Samuel practiced first in Palestine and afterward in Mesopotamia His bosom friend was Raw, a man possessed of the truest scientific spirit, for the Talmud tells us that he would spend his all to obtain bodies for dissection to perfect himself in anatomy Abba Oumna and Rabbi Gamaiel III in the fourth century ably maintained the prestige of the Jewish physicians, who in the fifth century became preeminent in Western Europe When a knowledge of Greek was lost they made themselves master of Arabic and obtained a key to all that mass of literature which was locked away for many subsequent years Soon after Spain had been conquered by the Caliphs in the eighth century great schools arose in Africa and in Europe, and in these the Jews were the leading teachers The Jewish School at Cairo first migrated to Cordova, then to Sicily, and, afterward moving to the Italian mainland, it established itself at Salerno, proceeding thence to Arles, Narbonne, and still later to Montpellier and Paris Avicenna, a Latinised form of Ebn Sina, Ebn Zohar, who is better known to us as Avenzoar, Ibn Roschd or Averroës, and Moses ben Maimon, called Maimonides, were the most illustrious Jews in the tenth and eleventh centuries their names are familiar to us from Chaucer s mention of them in his "Prologue to the Canterbury Tales" The priests looked with a jealous eye upon the encroachments of the Jews in medicine, and they obtained a formal excommunication against all who committed themselves to the care of a Jewish physician During the twelfth and thirteenth centuries the Jewish doctors spread from Spain over the whole of Europe penetrating even to the far East, for Saad Eddula was both physician and prime minister to the great Cham, Argun The Spanish decree of 1492 compelled 160,000 to 800,000 Jews to leave Spain within four months of its promulgation About a tenth of these made their way into Portugal and established schools there, the rest were dispersed, but many thousands died by the way The persecution of the Spanish Jews was not an unmixed evil it led to a wider distribution of the Hebrew race throughout Europe and to a dissemination of the knowledge and of the culture possessed by its best members France and Italy received especial benefit, and the Popes were wise enough to attach a Jewish physician to their service for several generations after the edict of banishment had been promulgated in Spain

On a Form of Low temperature Pasteurization of Milk —In the *Archives of Pediatrics* for August Dr Rowland Freeman contributes a laborious research, with the original processes and photogravure illustrations, on the above subject His conclusions are that Pasteurization at between 65 and 70 degrees C is recommended for the following reasons

1 It destroys almost all the ordinary air bacteria which occur commonly in milk

2 It destroys the bacillus tuberculosis, the bacillus typhosus, the bacillus diphtheriæ and many other pathogenic bacteria

3 It causes no change in the taste of the milk and avoids those chemic changes in milk which are produced by higher temperatures

4 It is possible to Pasteurize accurately at this temperature without the use of a thermometer

A question has been raised as to the advisability of the term Pasteurize It seems to me that this name is necessary, as no other word indicates the same thing—that is a low temperature *sterilization followed by rapid cooling The rapid cooling* is a most important part of the process If we use the expression low-temperature sterilization, the rapid cooling is apt to be overlooked Milk should be used only during the twenty four hours following Pasteurization Although the Pasteurized milk will not sour in several days if kept cold, it should be used only during the interval I have indicated Bottles of milk Pasteurized at about 68 degrees C and left standing on my laboratory table during the spring usually showed no separation of casein in less than three days Milk Pasteurized at 75 degrees C I have found to keep for a week or ten days in a refrigerator A very good demonstration of the keeping qualities of Pasteurized milk has been afforded by the Nathan Straus milk depots of New York The milk sold at these depots is Pasteurized at about 75 degrees C in large apparatuses constructed on the same principle as the one I have just shown After cooling it is stored in iced water until dispensed As many as seven thousand bottles are distributed by these depots during some days in summer This milk supplies the very poor of New York and goes into many homes that are not supplied with ice Two years ago, while preparing a paper I inquired of the superintendent whether they were at all troubled by any of the milk souring in the tenement houses He replied that he had had one complaint, which he had investigated, and had found that the milk had been kept under the kitchen stove When this charity was started in 1893 I advised Pasteurization at 75 degree C, and it was undertaken, although the gentleman having charge of it was assured by others that milk Pasteurized at this temperature would not keep under the conditions existing in tenement houses, and that a temperature of at least 80 or 90 degrees C should be used They have seen no necessity for using a higher temperature after three years' experience

The editor of the *Archives*, Dr Crandall, adds some pertinent remarks, as follows

"According to our prevailing terminology, the term Pasteurization is applied to the process of heating milk to a temperature of 167 degrees F, followed by rapid cooling This process modifies, somewhat, the taste of milk and produces slight chemic changes It is certainly desirable, if possible, to destroy the bacteria in milk without producing any other change Milk is a complex and delicate fluid and is very easily disturbed It is difficult in the case of large numbers of children to adapt cow's milk to the digestive capacity of the stomach, and it has been felt by practitioners that every added difficulty should be avoided so far as is compatible with safety The apparently simple question of the taste of milk becomes in some cases an important one Experience shows that change in taste does not occur in milk heated to about 70 degrees C and very few if any chemic changes The chief objection to Pasteurization below this temperature has been the uncertainty as to the thermal death point of the tubercle bacillus The more recent but very convincing investigations upon this point show that the death point for these germs is sufficiently low to warrant Pasteurization at a lower temperature than 167 degrees F Dr Freeman certainly seems to have proved that Pasteurization at about 155 degrees F is a safe and effective process by which many of the objections incident to the higher temperature are obviated His apparatus offers the most practical means of accomplishing this end which has yet been devised "

PRACTICAL NOTES

Unguents for Insect Bites —Brocq suggests the following preparations for the bites of fleas, gnats and bugs

1 Camphorated chamomile oil 100 grams , balsam of storax pur 20 , essence of peppermint 5 gr

2 Olive oil 20 gr , ointment of storax 25 gr balsam of Peru 5 gr

3 Naphthol 5 to 10 grams , ether q s to dis , menthol 0 25 c to 1 gram , vaselin 100 grams —*Journal de Méd de Paris*, October 18

Serum therapy of Typhoid Fever —Funck, superintendent of the Serum Institute of Brussels, announces as the results of extensive experiments, that the serum of animals immunized by means of typhoid cultures possesses all the properties ascribed by Pfeiffer to anti cholera serum, namely, that small doses protect against typhoid infection, but do not protect against infection from the coli bacillus He therefore believes in the therapeutic efficacy of the typhoid serum, but does not venture yet to recommend it for use outside of the laboratory —*Progrès Méd* , October 17

Intravenous Injections of Saline Solution in Puerperal Eclampsia —The patient had already had twenty attacks of convulsions, with profound coma between, when the first intravenous injection was made Five further attacks followed, and a second injection was made the next day, followed by complete cure with no more eclampsia Three thousand grams were injected in all, at 0 75 per cent —Coen in the *Ann di Ostet e Gin* , *Gaz Méd de Liege*, October 15

Cerium Oxalate in the Crises of Tabes —Professor Bechterew has been using cerium oxalate in cases of gastric crises of locomotor ataxy and reports marked success from this treatment The seizures of vomiting were greatly reduced in number, while the actual act of vomiting became easier, and at the same time pain, thirst and nausea were, to a great extent, diminished The psychic conditions also improved, restlessness subsided and sleep returned Micturition is said to have become slightly more difficult, but not enough to require a catheter The most important improvement, however, was that food could be retained owing to the diminished number of paroxysms of vomiting —London *Lancet*, August 22

Appendicitis a "Dysentery" of the Appendix —Golubow does not consider appendicitis a specific bacterial disease, but due to the fact that the usual microbes in the alimentary canal acquire extraordinary virulence from some cause unknown, and produce dysentery of the appendix, which may be epidemic He is led to these conclusions from observation of several cases of benign appendicitis appearing as an epidemic in his practice, among others, three scholars in a certain school who sat together on the same bench, were all taken with appendicitis within three days He describes the symptoms of this benign form as sudden sensitiveness in the center of the abdomen, localized by palpation above the right Poupart's ligament, elevated temperature, loss of appetite and constipation He thinks this form is often overlooked It passes away in two to three days —*St Pet Med Woch* , November 10

New Method of Making a Stomach Fistula —Heusner has treated successfully seven cases of impassible cardiac carcinoma, opening a fistula into the stomach by the following process He first makes a transverse incision just below the left hypochondrium, about 10 centimeters long, parallel with the long axis of the stomach He then exposes the cartilage of the seventh rib at its point of attachment to the costal arch This point is not above the pleural cavity, but over the first fibers of the diaphragm With the left hand a gauze tampon is introduced under the cartilage, and a hole is cut through it with a trocar the size of a thumb, passing obliquely from above downward and inward through the cartilage and the peritoneum With the fingers of the left hand and a pair of forceps, a piece of the anterior wall of the stomach is then drawn out through this hole and sutured, first to the cartilage and then to the skin The abdominal wound is then closed and painted with iodoform collodion, after which the protruding bunch of the stomach wall is opened and food introduced The operation is simple and without danger and the fistula thus made never shows an inclination to grow smaller in diameter, an important advantage —*Cbl f Chir* , October 17

Salol in Progressive Pernicious Anemia —The cure of a case of severe anemia is reported from Budapesth which had resisted for months the administration of iron, quinin, bone marrow, arsenic and inhalations of oxygen The cause was unknown No parasites were found in the feces, either adult or embryo Suspecting at last some auto infection salol was administered in 1 gram doses five times a day, and the condition of the patient began to improve at once Each time the medicine was suspended the former symptoms returned, but the dose was gradually diminished to 3 grams a day, and in three months it was possible to discontinue it entirely, as the patient had recovered his former health, with complete disappearance of all the anemic symptoms, including the paleness, heart murmur, tumefaction of the liver and spleen and the characteristic alterations in the blood —*Semaine Méd* , October 7

Gutta percha Gauze for Postpartum Hemorrhages —Cases of uterine or other hemorrhage that persist in spite of the tightest packing with the usual gauze, are relieved by an additional tampon of gauze impregnated with gutta percha The iodoform gauze acts as a drain and the blood keeps oozing through, but it is arrested by the gutta percha gauze, which is also soft and pliable, but is not absorbent Schæffer recommends to tampon first with the usual gauze, leaving a small end projecting as a drain, and then pack with the gutta percha gauze, closing the drain entirely if necessary —*Semaine Méd* , October 21

Macroquila —The *Revista Médica de Chile* describes and illustrates in its April number a case of this rare congenital affection of the lips The young man's lip, hypertrophied and ulcerated, formed a conical projection, measuring 12 centimeters from the corner of the mouth to the point, 8 5 at its widest and 4 75 at its thickest part The lip had always protruded, but not enough to constitute a deformity, until he was 13, when a violent blow on the chin caused him to bite the lip lengthwise, producing a deep wound and severe hemorrhage It slowly increased in size after this and a tumor formed until the lip resembled the end of a ' Vienna loaf" of bread San Cristobal removed the tumor and part of the lip, making a new one A fistula persisted a couple of months when it healed nothing but the scar remained of the previous deformity

Estlander's Operation on a Child —Preetorius describes in the *Antwerp Annals* his surprising success with this operation in a case of purulent pleurisy on the left side of eighteen month's standing, the patient a girl of 6 He first resected 5 cm of the fifth rib on the nipple line and 5 cm of the seventh on the scapular line, leaving a double drain in the thorax Two weeks afterward he resected 14 cm of the seventh rib, 13 cm of the sixth, 12 cm of the fifth, 10 cm of the fourth and 4 cm of the third The cavity still persisting and containing about 70 grams of fluid, he performed a third operation a month later, removing the ten last centimeters of the sixth rib The fistula healed in the course of a month and complete recovery fol lowed The child would inevitably have succumbed without this heroic operation, as liver and spleen were very much enlarged at first, but gradually subsided —*Presse Méd* , October 3

Neuritis Cured by Local Compression —Peripheral neuritis of traumatic origin is apt to be exceedingly rebellious to either medical or surgical treatment, but Delorme has invented a new cure which has proved a perfect success in each of the ten cases in which he has tried it, and its efficacy has also been confirmed by others His first case was a soldier wounded in 1870 by a bullet in the neck A keloid scar had formed where it had emerged close to the posterior border of the sterno mastoid, three by four centimeters in size, which had been the seat of continuous pain ever since, that is, for twenty three years No relief had been derived from the use of the thermo cautery, bistoury, galvano cautery, Vienna caustic, etc Delorme conceived the idea of destroying the nerve tissue in the cicatrix by forcible compression Seizing it between the thumb and the forefinger of each hand, he squeezed it with all his might, for a few seconds Four days later he repeated the operation, and the pains vanished, and have never returned during the three years since The other cases were of more recent occurrence, but they had resisted all other treatment, and the same forcible compression produced complete cure Six were neuritis consecutive to accidents to the feet, finger or wrist, the others to the face, neck, leg or shoulder In case of pain in the finger after a partial amputation, opening of a phlegmon, or a crushing bruise, he first carefully locates the exact limits of the hyperesthetic zone, and then, the patient seated or reclining, held by the assistants, the arm and wrist immovably fastened, he seizes the finger between his two thumbs and forefingers, and exerting all his strength, compresses successively every spot on the entire surface of the hyperesthetic zone, commencing with the most painful points, and exerting there the maximum pressure A few seconds exhausts both operator and patient, as the process is very painful After a few minutes rest it is repeated by the operator or one of the assistants, sometimes two or three taking it in turn One operation is usually sufficient, but sometimes as many as three are required, at intervals of several days The trophic troubles, cyanosis, edema, stiffness in the joints, etc , disappear with the pain Delorme has never used an anesthetic for fear of interfering bulbar reflex, but suggests that chloroform or local anesthetics might be used *Bulletin Médical*, October 14

Treatment of Malaria in Children —Feuchtwanger describes in the *Therap Mon* for August the results of his experience in Palestine, where malaria is endemic He tried various substitutes that have been suggested recently, but found that he always had to return to quinin He uses principally the bisulphate for children, as it seems more efficient with them, although it does not contain so much quinin as the sulphate He gives as many decigrams as the child has years, or as many milligrams as it has months Under 2 months he has it rubbed into the arm pits and groins in a salve made of 2 grams of quinin in 40 grams of lard The effect of these frictions has always been the same as if the quinin had been administered by the mouth, notwithstanding that the absorption of quinin through the skin is denied by all the authorities At 3 to 4 months of age he administers the quinin in suppositories three times a day, each containing twice the dose for that age Sometimes they produce rectal tenesmus, when he substitutes enemas for the suppositories The quinin produces exactly the same effect in suppositories or enemas as if taken into the stomach He substitutes the valerianate of quinin for the bisulphate in cases of malarial neuralgia He has also obtained brilliant success in cases of pernicious malaria with coma, paresis of the pupils, vomiting, hemoglobinuria etc , in children of 10 to 12, by subcutaneous injections of hydrochlorate of quinin After the third injection of 50 centigrams the hemoglobinuria ceased as if by magic, ice taken internally arrested the vomiting and baths at 27 degrees C controlled the hyperthermia In three days quinin suppositories were given and the children were saved The consecutive malarial cachexia in one case was cured by tonics, iron, arsenic, calisaya bark This cachexia is often difficult to conquer To prevent the return of the febrile attacks, he keeps up the use of the quinin for several weeks, with or without tincture of litmus and small quantities of diluted hydrochloric acid If this treatment fails, he returns to arsenic and administers a mixture containing 2 grams of solution of potassium arseniate and 8 grams of the tincture of malate of iron Of this he gives five drops three times a day to a child of 3 years, increasing the dose a drop a day until it is 15 drops, and then diminishing to 5 again If there are gastric troubles this arsenic medication is contraindicated In this case there is no resource but change of locality He has been successful with older children, 8 to 15, with pills composed of hydrochlorate of quinin, arsenious acid and reduced iron —*Presse Méd* , October 3

Hypodermoclysis in the Treatment of Thermic Fever —Dr F A Packard of Philadelphia communicates to the *Medical News* August 22, a case of the above nature as treated in the wards of the Pennsylvania Hospital The patient was a contractor, aged 48 years, received in the hospital at 8 30 P M on August 12 He was rubbed with ice on the way to the hospital in the ambulance, but on admission he was found to have a temperature of 109 6 degrees, pulse 154, respirations 33 He was unconscious, but not convulsed, with moderately contracted pupils and markedly stertorous respiration He was at once put in a tub of iced water and given nitroglycerin (1 100 gr) hypodermically After being in the tub for five minutes he was removed, placed on a bed and vigorously "ironed" with ice At 9 07 his temperature was 103 4, pulse 146, respiration 32 and irregular At this time he began to have spasmodic contraction of the extremities At 9 35 he became very cyanotic, the respirations became slow and labored, requiring, finally, the use of artificial respiration and the battery At 10 05 his temperature had remained below 103 degrees for some time, but there was marked twitching of the right side of the face added to the previous spasmodic contractions The pulse at the wrist was imperceptible at this time At 10 18 he was "fearfully cyanotic," and the jaws became rigidly fixed He was bled from the median basilic vein to the extent of sixteen ounces, immediately after which the respirations became more deep and quiet and the spasmodic twitching lessened At 10 25 half a pint of sterilized normal salt solution was slowly introduced beneath the skin of the pectoral region on both sides The pulse at once improved and at 10 40 he became conscious and gave his name, while at about the same time the twitchings ceased Nothing further of interest has occurred up to the present time, the patient being thoroughly rational, perfectly comfortable and showing no symptoms, save for slight elevation of temperature that is easily accounted for by a quite severe glossitis that has resulted from a lacerated wound of his tongue, produced by his teeth during his period of pseudo convulsions Inasmuch as in a very large number of cases of thermic fever the symptoms rapidly disappear after reduction of temperature, there must be some factor other than the high bodily temperature alone, which continues to be present in those cases wherein improvement fails to follow the fall in the bodily temperature If, in such obstinate cases, bleeding is performed, it is found that the blood flows very sluggishly from the vein that it is thick and tarry, and that it is evidently lacking in its fluid portion Such being the case, it seems not unreasonable to surmise that the persistence of coma, stertor, muscular rigidity, etc , may be due to the lack of water in the blood Why some cases should suffer from this condition, while others escape, it is difficult to say, but careful inquiry might elicit some facts in regard to the amount of perspiration lost, the amount of fluid ingested just prior to the attack, and other features of the various cases that might throw some light upon this difference in course

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SATURDAY, NOVEMBER 21, 1896

POLIENCEPHALOMYELITIS

We have a good deal yet to learn concerning the action of various poisons upon the nervous system and particularly as to the effects induced by the group of infectious diseases A growing experience has taught that nerve-fibers and nerve-cells may suffer in numerous ways through the deleterious influence of the agencies just named We may thus have inflammation, hyperplasia, degeneration and sclerosis in white or gray matter in varying distribution, with corresponding diversity of symptoms There are, however, many conditions in which, despite the presence of the most profound and pronounced symptoms, no lesion is demonstrable The alterations that exist under these circumstances must therefore be looked upon as of the intangible nature which for the present we must be satisfied to designate nutritional, chemic or toxic When recovery takes place these changes may disappear and leave no trace of their previous existence On the other hand they may lead to structural alterations, with persistence of symptoms A group of disorders of this kind, especially characterized by muscular weakness and undue readiness of fatigue and exhaustion has received interesting consideration at the hands of KALISCHER (*Zeitschrift für klinische Medicin*, B xxxi, H 1, 2, p 93), who enters at length into a discussion of their clinical and pathologic aspects He reports in detail a carefully studied case of chronic poliencephalomyelitis in a man, 50 years old developing in the sequence of an attack of influenza, and refers to a number of other cases, some of which have been reported under various other designations, all agreeing, however, in their essential features, and the symptoms present being referable to disturbance in the functions of the motor bulbo spinal nuclei for the entire muscular system situated in the central gray matter from the floor of the fourth ventricle to the lumbar portion of the spinal cord

The disease is most common in persons between 20 and 60 years of age It is usually subacute in onset rarely acute or insidious, at first progressing subacutely and later pursuing a chronic, stationary or varying course Manifestations of constitutional disturbance such as fever, headache, vertigo, vomiting, are generally wanting throughout In most cases the ocular muscles are first involved and in irregular order one after the other Ptosis may appear first on one side and then on the other and may be slight or pronounced Then the other muscles become involved, usually in greater degree upon one side than upon the other The fourth and sixth nerves are not spared Diplopia is not always present, and almost never well defined strabismus The internal ocular muscles usually escape The disturbance of the ocular muscles generally recedes, to give place to bulbar or spinal symptoms, or they may remain in association with the latter Sometimes the disease sets in with bulbar symptoms and rarely with weakness of the muscles of the neck, trunk and extremities, advancing upward Usually extension occurs in stages, weakness in the upper or lower extremities being suddenly added to the paralysis of the ocular muscles, or paralysis of the muscles of deglutition or of the ocular muscles being added to weakness of the neck Not rarely bulbar symptoms predominate, including weakness, fatigue, permanent or progressive paralysis of the muscles of the face, tongue, those of mastication, of deglutition, those of the esophagus, in unequal degree upon both sides In the extremities the parts nearest the trunk are involved earlier than those at a distance, the extensors at times more than the flexors

The tendon-reflexes, and especially the knee-jerks, are enfeebled or lost The sensory and the sensorial functions usually remain uninvolved, as well as psychic activity and the sphincters Fibrillary twitching is not observed Muscular atrophy does not take place as a rule, if at all, late and in slight degree Paralysis is the primary and the most conspicuous manifestation The electric reactions remain unchanged or are enfeebled and in grave cases perhaps lost Degenerative reactions are rare The so called myasthenic reaction is observed in some cases—that is, the muscles respond normally to faradic currents of ordinary intensity, but to tetanizing currents the response grows gradually more and more feeble until it ceases altogether It appears most marked when the fatigue-phenomena on voluntary innervation are quick and pronounced

The intensity of the palsy is variable Fatigue and recovery take place readily and quickly The degree of fatigue does not always correspond to the degree of permanent weakness and paresis In severe cases the patients become completely helpless In walking, the knees may give way, or the gait may be staggering Active exercise may be attended with an urgent sense of the need of air, from fatigue of the respiratory muscles Not rarely sudden death occurs from paralysis of the vagus or of the diaphragm Other dangers may arise from sudden weakness of the muscles of the pharynx and esophagus, so that liquid diet may be necessary and regurgitation through the nares may take place If the hands are involved there may be difficulty in carrying food to the mouth, in writing and in other manual exercises When the eyes are used, the ptosis is aggravated and the muscles of the neck become weaker from efforts to hold the head erect Speech becomes nasal and after a time indistinct, low and whispering The ability to sing and to whistle is lost, and smoking becomes difficult

A characteristic feature of the disease is the rapid recovery of strength after rest and the improvement in the morning after sleep Remissions in the intensity of the symptoms occur from time to time and may continue for varying periods—from days even to years—and simulate perfect recovery The progress of the disease may further be very slow and characterized by exacerbations, or the morbid process may finally cease to progress, leaving a condition of permanent weakness Sometimes death occurs unexpectedly

In many cases no lesion has been found after death In one case degenerative changes were present in the medullary sheaths of the nerve-roots of the medulla oblongata In another there was vascular dilatation, with hemorrhage and degenerative-atrophic conditions of the ganglion-cells of the central gray matter These various lesions, however, are inconstant and inadequate to explain all of the symptoms so that it must be assumed that there occur chemic, nutritive or toxic changes capable of disappearing and of repair without leaving evidences of their previous presence

In an etiologic connection most of the cases reported have had some direct or indirect relation with one or another of the infectious diseases, others with over-exertion or with excessive use of alcohol or tobacco No relation to syphilis could be established

Subacute or chronic poliencephalomyelitis is to be distinguished from acute encephalitis by the absence of acute onset, of constitutional manifestations (fever, delirium etc) and other cerebral symptoms (aphasia, etc), by its peculiar and more systematic invasion (bulbo-spinal symptoms) and its chronic, partly remitting, partly progressive course Poliencephalomyelitis differs from acute poliencephalitis in the absence of symptoms of general disturbance (vertigo, vomiting, optic neuritis, delirium, etc), in the less rapid course and in the presence of bulbar and spinal symptoms From progressive bulbar paralysis it differs in the less characteristic localization and a less universal involvement of the bulbar nuclei, in its irregular, fluctuating, remitting course, in the absence of fibrillary twitching and of degenerative reactions, in the relative absence of muscular atrophy, in the presence of muscular fatigue, the possibility of improvement, in the absence of distinctive lesions, in the early and frequent involvement of the ocular muscles and also those of the neck and extremities, and in the irregular, abrupt involvement of the entire system of bulbo spinal nuclei From amyotrophic lateral sclerosis it is to be differentiated by the absence of spastic manifestations and from progressive muscular atrophy by the varying course, characteristic localization, atypic distribution, unsteady progression, early participation or precedence of paralyses of bulbar nerves and of the ocular muscles It is to be distinguished from pseudo-bulbar palsy by the mode of onset and by the absence of psychic disturbance and of hemiplegia

In the treatment of poliencephalomyelitis drugs have proved of no service The best results will be secured through rest and the avoidance so far as possible of muscular activity, every unnecessary fatigue should be avoided Solid food should be interdicted and only small quantities of soft food and of liquid given at frequent intervals In aggravated cases the administration of nutritive enemata may answer a useful purpose Especial attention should be directed to prophylaxis, in so far as the danger of infection is always to be avoided, and should such effort prove futile the acquired disease, with its attendant intoxication, should be gotten rid of with all possible expedition During convalescence from infectious diseases undue physical effort should be avoided and roborant treatment should be instituted

THE PASSING OF THE HOLY STONE

> Six days shalt thou work and do all that thou art able,
> On the seventh, holy stone the deck and scrape the iron cable
> —*Old Merchantman Rhyme*

Another time-honored "custom of the service"—but honored in no other respect than its antiquity—has fallen before a few pen-strokes over the signature of the Assistant Secretary of the Navy—the practice of holy-stoning the decks of men-of-war is to be henceforth abandoned As commodores and midshipmen were once head and tail of the personnel of the naval service, and sails and spars and tacks and sheets, things without which no man-of-war could be, so was the holy-stone, the sacred possession of the Kaaba of the quarter-deck, which every old shell-back had first detested in his youth and then accepted in his old age, as the thorn in the flesh which it was his lot to wear without repining This was yesterday, and to-day *Midshipman* Easy might roam the decks with his little hanger and find no messmate, "commodore" is scarcely more than a traditional title, sails and spars have disappeared, reefing and furling are lost arts, and now the holy-stone is for all future time to be anathema *Maran atha!*

For years before the oldest living medical officer of the Navy received the blue ribboned parchment which constituted him during the pleasure of the President of the United States, an officer of the Navy, to whose orders "all officers, seamen and marines under his command" were "strictly charged and required to be obedient" (pregnant words, though the pregnancy be only phantom)—this venerable stone has been denounced for the unholy uses to which it has been devoted, and now, at last, each old survivor of the conflict can congratulate himself and reverently say "I have fought a good fight, I have run my course"

The scourge of the sea has not been storm and wreckage, not battle and bloodshed, not typhus and scurvy, ship fever and dysentery, but more murderous than all these, *wet decks*, not decks wetted by raging sea or drenching rain, but deluged daily and deliberately by the pumps under pretense of cleanliness, and this in defiance of the unanimous protest of the medical officers of every naval service on the globe In vain they showed how this artificial saturation of the ship's atmosphere was inimical to health They demonstrated by unerring statistics that a *wet ship was always an unhealthy ship* They pleaded and protested, they suffered insult and braved court-martial—but the holy-stone kept on grinding out, in daily swing, with sand and water, the lives of men whom wind and sea had failed to mark and mar

There have been, in recent years, many instances of commanding officers of exceptional intelligence, who have listened to the advice of the medical officers and instituted the practice of shellacking the decks below the water line and cleaning them with hot water cloths and swabs Captain **John McNeill Boyd** of the British Navy candidly admitted that "the objections to wet decks are supported by the medical officers with such a weight of evidence that they can not be gainsaid" But the upper decks have suffered the infliction of sand and water and holy-stones until a few weeks ago, when the fulmen of the Department consigned them to the scrap-heap, not because they were insanitary and consequently, damnable, but because they wore out the decks and were consequently expensive *Finis coronat opus*, however it may be accomplished, and hence no sanitarian will repine that the credit be not given to him for having accomplished this crowning achievement of the work of naval hygiene

The kindred need of marine hygiene, ventilation, has come about through necessity following the construction of the great machine vessels, which have supplanted the white-winged queens of the sea The almost hermetically sealed floating iron boxes were uninhabitable without constant artificial ventilation established by aspirating tubes and fans, whose motor engines, added to the hundred and more others that fill the interiors of modern battleships and cruisers, encroach upon the air space With fresh dry air, tempering somewhat the evils of overcrowding, with distilled aerated water, good food and proper clothing, the man of the sea is now far better cared for than his predecessor, Ben Bolt, except when he gets sick or breaks a bone, and then he is stowed away in the same contracted, dark noisy place in the bows, that is, in American men of war, where the din of rattling chains and capstans, the odors of the paint room, and the grime and grease of this region, neutralize ano dynes and soporifics and keep him keen to suffering The sites of the hospitals in other services are chosen because of their fitness for their purpose, but with us the suggestion that "she would be nothing but a damned quarantine hulk and had better hoist the yellow flag at once," was urged in the case of one of our finest modern vessels, when the medical departments ought to equip her with the same hospital establishment as English, French, German and Russian vessels of her type

The hostility to their medical associates by line officers is incredible to civilians and perhaps can only be explained by an original underlying jealousy of the acquirements of a corps, whose humanitarian duties and obligations impel its members to persevere in the face of every opposition, until as in the matter of holy-stoning the decks, their humane objects shall be accomplished Ultimately, the claims of the sick, as of their care-takers, will be recognized and provision be made for them more in accordance with the enlightenment and philanthropy which characterize this age Much of the disagreement, as in civil life, doubtless depends upon the inability of non-professional men, who are themselves robust and healthy, to recognize the importance of what seems to them to be only trivial fault-finding by their medical associates, and they attribute to cavil recommendations that conflict with their own no doubt honestly conceived ideas The health officer on shore, and the medical officer on board ship, who is preeminently a health officer, have the same up-hill work, but they have at last gained so sure a foot-hold that ere long their views will be heard not in entreaty, but as of those having authority

THE PHYSICIAN'S WIFE

The social economy of the physician's life, matrimony makes or mars [illegible] seriously handicaps or aids the [illegible] ar intellectual life As J [illegible] about Doctors") Considering the opportunities that medical men have for pressing a suit in love, the many temptations to gentle emotion that they experience in the aspect of feminine suffering, and the confiding gratitude of their fair patients, it is perhaps to be wondered at that only one medical duke is to be found in the annals of the British peerage

Prudence would dictate to a physician, endowed with a heart, to treat it in the same way as Dr Glinn thought a cucumber ought to be dressed, to slice very thin, pepper it plentifully, pour upon it plenty of the best vinegar, and then throw it away A sentimental disposition is a great nuisance to a physician He has quite enough work on his hands to keep the affections of his patients in check, without having to mount guard over his own emotions According to Thackeray, girls make love in the nursery and practice the art of coquetry on the page-boy who brings coal upstairs, a hard saying for simple young gentlemen triumphing in the possession of a first love An English fair dame, who enjoys rank among the highest and wealth equal to the station assigned her by the heralds, not only aimed tender glances and sighed amorously to a young waxen-faced, blue-eyed apothecary, but even went so far as to write him a letter proposing an elopement, and other merry arrangements, in which a carriage everlastingly careering over the country at the heels of four horses, bore a conspicuous part The silly maiden had, like Dinah, a "fortune in silvyer and gold," amounting to $200,000, and her blue-eyed Adonis was twice her age Fortunately he was a gentleman of honor Without divulging the mad proposition of the young lady he induced her father to take her for twelve months for change of air and scene Many years thereafter when the heroine of this little episode, had become the wife of a very great man, and the mother of children who bid fair to become ornaments to their illustrious race, she expressed her gratitude cordially to this Joseph of physicians, for magnanimity in not profiting by the absurd fancies of a child and the delicacy with which he had taken prompt measures for her happiness More recently, she manifested her good will to the man who had offered her what is generally regarded as the greatest insult a woman can experience by procuring a commission in the army for his eldest son

The embarrassment Sir John Eliot suffered under from emotional overtures of his fair patients are well known The quack St John Long himself had not more admirers among the elite of high-born English ladies The King had a strong personal dislike to Sir John, heightened by a feeling that it was sheer impudence in a medical man to capture without effort the hearts of half the prettiest English women and then shrug his shoulders with chagrin at his success Lord George Germain had hard
work to wring a baronetcy from his Majesty for t
victim of misplaced affection

"Well,' said the king at last, grudgingly promisi
to make Eliot a baronet, "my lord, since you des
it, let it be, but remember, he shall not be my ph
sician ' "No sir," answered Lord George, "he sh
be your Majesty's baronet and my physician"

Sir John, to scare away his patients and patro
esses, had a death's head painted on his carria
panels The result of this on his practice and l
sufferings, however, was the reverse of what he desir
One lady, daughter of a prime minister, ignorant th
Sir John was otherwise occupied, made him an off
but learning to her astonishment, that he was marri
vowed that she would not rest till she had assassi
ated his wife

Dr Cadogan, of Charles II s time, was also a fav
rite with the ladies He was wont to spend his da
in shooting and his evenings in flirtation T
former tastes led him to receive the following poe
dose

"Doctor, all game you either ought to shun,
Or sport no longer with the unsteady gun,
But, like physicians of undoubted skill,
Gladly attempt what never fails to kill,
Not lead's uncertain dross, but physic's deadly pill"

That he was a good shot is not known, but
was adroit as a squire of dames, since he secur
as his wife a wealthy lady over whose property
had unfettered control Against the money, ho
ever, there were two important points that had to
"set off,' the bride was old and querulous Such
woman was unfitted to live happily with an emine
physician on whom bevies of court ladies smile
After spending a few months in alternate fits of je
ous hate and jealous fondness, the poor creature co
ceived that her husband was bent on ridding his h
of her execrable temper by poison One day, su
rounded by her friends, in the presence of her lo
and master, she fell in a hysteric spasm exclaimin
"Ah, he has killed me at last I am poisoned!
"Poisoned," cried the lady friend, turning up th
whites of her eyes, "Oh, gracious goodness, you ha
done it, Doctor!" "Of what do you accuse me?" ask
Cadogan, with surprise "I accuse you of killin
me ee," responded the wife, doing her best to imita
a death-struggle "Ladies" answered the Docto
with admirable nonchalance bowing to Mrs Cad
gan's bosom associates, "it is perfectly false Yo
are quite welcome to open her at once, and then you'
discover the calumny"

John Hunter administered a scarcely less startlin
reproof to his wife, who, though devoted to him, an
in every respect a lady worthy of esteem, caused Hu
ter at times no little vexation by her fondness fo
society She was in the habit of giving enormou
receptions, at which authors and artists of all shad

used to assemble to render homage to her far from commonplace literary powers HUNTER had no sympathy with his wife's poetic aspirations, still less with the society which those aspirations led her to cultivate Grudging even the time which the labors of practice prevented him from devoting to the pursuits of his museum and laboratory, he naturally could not restrain his too irritable temper (due to cardiac disease) when Mrs HUNTER's frivolous amusements deprived him of the quiet requisite for study Even a fee that called him from his dissecting instruments could not reconcile him to interruption "I must go," he would say reluctantly, "and earn this d—— guinea, or I shall be sure to want it to-morrow " Imagine the wrath of such a man, finding on return from a long day's work, his house full of musical professors, connoisseurs and fashionable idlers, in all the confusion, hubbub and heat of a grand party, of which his lady had forgotten to inform him Walking straight into the middle of the reception room, he surveyed his unwelcome guests, surprised to see him dusty, toil-worn and grim, so unlike what the man of the house ought to be on such an occasion "I knew nothing," was his brief address, "I knew nothing of this kick-up and I ought to have been informed of it beforehand, but as I have now returned home to study, I hope the present company will retire " Mrs HUNTER's drawing-rooms were speedily empty

One of the drollest medical love stories relates to Dr THOMAS DAWSON, a century since alike admired by the inhabitants of Hackney as a pulpiteer and physician Of his acquaintances Miss CORBETT of Hackney was at the same time the richest, most devout and most afflicted in health Ministering to her body and soul, Dr DAWSON had frequent occasion for visiting her One day he found her alone sitting with the large family Bible before her, meditating Dr DAWSON read the words to which her right forefinger pointed, the words of NATHAN to DAVID "Thou art the man " The Doctor took the hint, May 29, 1758, he found a wife, and the pious lady won a husband

The day ABERNETHY was married he went down to the lecture room to deliver his customary instructions to his pupils His selection of a wife was as judicious as his marriage was happy The funny stories long current about his mode of "popping the question" are known to be most delusive fabrications and extreme exaggerations The brutality of procedure attributed to him by current rumor was foreign to his nature The ABERNETHY biscuit was not more audaciously pinned upon his reputation, than was the absurd falsehood that, when he made his offer to his future wife, he had only seen her once, and then wrote saying he should like to marry her, but as he was *too busy* to "make love," she must entertain his proposal without further preliminaries, and let him know her decision by the end of a week

One type of wife different from these is drawn by Dr WEYMOUTH in "Over the Hookah "

> "Speaking of the selection of wives, I know one doctor, a type of a hundred others, who evidently had an eye to wind ward when he married The lady in the case is a past mistress of diplomacy and medico political intrigue beside whom DISRAELI's reputation and MACHIAVELLI's malodor are weak indeed She belongs to several churches and to card and social clubs galore, and makes a specialty of drumming up practice for 'my doctor ' The doctor rarely goes out with her—he don't have to, she can do business better with him out of the way It is embarrassing, you know, just as she is in the midst of a peroration descriptive of the latest exploit of this modern HIPPOCRATES, to have the dried up, microcephalic, weasened little animal appear in evidence
>
> "'Do you know, ladies, I am afraid my poor doctor is going to work himself to death Why, he was out three whole nights last week, and didn't have a wink of sleep A prominent lady on Michigan Avenue (the patient is always prominent and lives on Michigan Avenue or Astor Street or in some equally fashionable locality) had an attack of appendicitis and had been given up by five doctors before my doctor saw her She pulled through, but my doctor says that if the family had delayed sending for him just thirty minutes more she would have died '
>
> "Now as a matter of fact, my boy, remarks Dr WEYMOUTH, I once overheard this lady in the midst of a similar yarn, when I happened to know the circumstances In the first place, that doctor couldn't lance a 'gum boil' without endangering the internal carotid, and in the second place, those three nights were spent in discussing the relative merits of 'two pair,' and 'three of a kind ' He did make several calls, of the other fellow's hand, you know, but the only ladies he saw were a choice variety of queens, hearts, clubs, spades and diamonds They didn't live on Michigan Avenue either, but he found those particular lady patients in a cosy corner of the M—— club "

This type in its best qualities caricatures the nobler, truer picture of the American physician's wife, drawn by Dr CLAIBORNE in an address before the Virginia Medical Society The Virginia physician, with whose wife Dr CLAIBORNE deals, was always known as a family man He usually married early in life and with the advantages of social position, wealth and culture, the latter sharpened and improved by travel, a privilege not so common or easy then as now, was considered an eligible party and had no difficulty in securing a desirable partner But he was often, indeed, generally away from home, physicians being few and the distance between the homes of his patients often great On the mistress of the mansion therefore devolved more than her share of domestic duties If his home were on a plantation or in a country town—even then a plantation and negroes were essentially a part of a gentleman s estate—the management of affairs in general, in conjunction perhaps with an overseer, devolved upon her to a great extent She was known as a business woman and as the characteristic lavish hospitality called to the doctor's house a retinue of visitors and retainers on occasion and without occasion, upon her devolved, in his frequent and protracted absence, their reception and entertainment In dispensing these offices she was to the manner born As the daughter of an old Virginia gentleman, and only such a woman could have filled the heart and fitted the fortunes of the old Virginia physician, she was in her native sphere when playing the gracious hostess and the doctor trusted her with a faith born not only of personal devotion but of pride in her preeminent fitness for her place As the mother of his children he consigned to her with perfect trustfulness all the responsibilities of their management, their habits, their morals and their education Even in their sickness, often succumbing to the habit of perfect confidence in her wise and judicious management, he left her to do the dosing of the family and she would give a dozen doses of physic to his one She was not only literally but liberally his helpmate

SERUM DIAGNOSIS OF TYPHOID FEVER

In an article on the serum diagnosis of typhoid fever which appeared in our issue of October 31, page 962, we called attention to the action of one of the provincial boards of health of Canada in testing the practical utility of Dr WYATT JOHNSTON's method of dealing with a little dried blood from the lobe of the ear or the tip of the finger of the patient under observation We concluded our remarks by saying that no doubt other boards of health would take up the subject and aid in the advance of our knowledge of typhoid fever and other febrile conditions The promptness with which Dr JOHNSTON's experiments have been verified shows that we did not over-estimate the energy of the bacteriologists in ever striving after something new, nor the enterprise of the health authorities in utilizing their work Recent experiments in the bacteriologic laboratory of the Army Medical Museum, Washington, D C, have given results which inspire confidence in the method The test is based on the action of the blood serum of a typhoid fever patient, or the liquid obtained by moistening a dried blood drop from such a patient, on the typhoid bacilli of a pure bouillon culture The active movements characteristic of the typhoid bacillus in liquid cultures are promptly stopped and the bacilli become aggregated into groups or masses These results are not produced by the blood of a person in health Dr WALTER REED, U S Army, conducted the experiments at the suggestion of Surgeon-General STERNBERG He examined twenty-eight cases of suspected typhoid fever and obtained twenty-two positive and six negative results The patients were in various stages of the disease, but most of them had passed the second week and a few were convalescent In two of the negative cases the estivo-autumnal malarial parasite was found a third case was shown at the postmortem examination to have been one of general peritonitis, originating in disease of the appendix, a fourth case was probably one of tubercular disease of the brain in a child Concerning the two remaining negative cases the conclusion was reached that they were probably not typhoid fever cases In view of these successful results the Surgeon-General has called upon medical officers in charge of post hospitals to forward to Washington, D C, samples of blood from febrile cases of undetermined causation with a full clinical record of each case submitted to the bacteriologic test Glass slides in suitable slide boxes have been issued for the transmission of the samples This, it is believed, will aid in defining the character of the febrile cases sometimes reported as simple fever, continued fever, typhomalarial fever, Texas fever, mountain fever, etc, and will enable medical officers to recognize the existence of typhoid in cases clinically obscure without having to wait for a postmortem opportunity of demonstrating the pathognomonic lesion

The Health Department of the City of New York also has moved in this direction Mr HERMANN M BIGGS, the bacteriologist in charge of its laboratory, was authorized Nov 6, 1896, to place facilities at the command of local physicians for the diagnosis of their obscure cases The Health Department of Chicago has issued an unsigned circular giving the history of this method of diagnosis, which was distributed at the last meeting of the Chicago Medical Society (November 16)

LIBRARY WANTS AND SUPPLIES

In another column we publish the first of a series of lists of periodicals and books either desired by public medical libraries or that will be given to such libraries in furtherance of a work undertaken by Dr GOULD of Philadelphia

It should be most earnestly brought home to the conscience of the profession that we need more and better public medical libraries, and that there is annually wasted most valuable literature which, with a little care and system might be made highly serviceable to medical science and progress Every year the private libraries of physicians are being scattered or sold for old paper, while public reference-libraries are in the greatest need of the same material for completing their files or sets Wishing to do what is possible for the purpose Dr GOULD has in view, we call especial attention to this most commendable enterprise It is Dr GOULD's intention to act as the intermediary between libraries and donors, in order that books or files of medical journals of physicians may not be destroyed, and that public libraries may be multiplied and their shelves filled with works which each year become more and more valuable

Upon the death of a physician, friends should use their influence to have his library utilized in this way The better plan is for the owners during life to so arrange for the proper disposal of the books, etc Every medical society, the physicians of every city, village, or county, should consider it an important duty they owe their profession to encourage the formation of a public medical library It does not enter into Dr GOULD's plan to supply private libraries, but on the contrary to guide the private library to its proper destination, the public library Neither is it, except in peculiar circumstances to buy or sell The entire service is gratuitous, aiming to help those who wish to give, to place their gifts where there is promise of the greatest professional benefit Already Dr Gould has been able to supply libraries with several thousand numbers that would otherwise have been wasted

We most cordially commend the scheme and trust our readers will bear it in mind, preserve the published lists, and whenever any occasion may arise, to correspond with Dr Gould Librarians of public libraries should classify and make lists of the duplicates they will give away to other libraries, or exchange for others needed to complete their own files

CORRESPONDENCE

A Prevalent Error in Refraction Work

Minneapolis, Minn , Nov 16 1896

To the Editor —I have been strongly impressed for some years with the fact that many oculists, some of whom are scientific and careful men, are in the habit of over correcting plus refractive errors For a shorter period I have been convinced that most oculists, myself included, have been giving low plus cylinders where minus lenses were indicated

This error has grown out of the teaching of our text books that at six meters or twenty feet the rays of light are approximately parallel, and that for the correction of refractive errors the strongest plus or the weakest minus glass should be given which give the clearest vision at this distance

Charles S Bull, I think, called attention to the fact this rule would lead to an over correction of 25 D in the case of H , but the fact has evidently not been sufficiently impressed With a less distance than 20′ the error is evidently greater, and as a large number of oculists have not more than 15′ at their disposal, unless some efficient method is at hand for checking and correcting their findings, serious trouble is likely to result The retinoscope is a very efficient check if one has sufficient skill and confidence in his findings, and if as a final test the patient is made to look across the street while weaker and stronger lenses are alternately placed before the eye, the surgeon may be absolutely sure of his results

While the giving of a too strong plus lens is bad enough, the other error mentioned, the giving of a low plus cylinder where a minus glass is demanded, is in some cases even more disastrous, and is unfortunately a very common error After I had become fairly proficient in the use of the plane mirror as a retinoscope, I found that in cases where reversal of the shadow was induced by a weaker plus lens than 1 D , in one or more meridians, my patient would generally accept a + 50 or + 25 cylinder, and as my veneration for authority was stronger than my confidence in my retinoscopic results, he always got a plus cylinder Most of my patients were satisfied that they had got the best correction possible With the few exceptions I always found some heterophoria and satisfied most of them with muscle training During all this time I was suspicious of my results in certain of these cases In hyperopic cases where the retinoscope indicated a considerable degree the trial lens findings were consistent with the retinoscopic, while in the class of cases under consideration I knew they were not consistent

In May, 1894, X , a clergyman, consulted me, complaining of eye and headache and general nervousness He had had trouble for years and was able to do his work only with great difficulty He had been under the care of prominent oculists in Milwaukee and Chicago In 1892 Dr B of the latter city had given him + 75 ○ + 50 C vert , which he had been able to use with some relief in his work In 1893 Dr Hotz had ordered constant use of + 50 C vert He had also ordered the use of prisms for work I found 2° prisms base in Whether they were so ordered is uncertain Dr Hotz's prescription had given decided relief for a time, though the ability to work had remained limited

I found R 20 30, L 20 20, slightly improved in each eye by + 50 C vert Latent R hyperphoria 5° Esophoria at 20′ 1° At 13″ exophoria 6° Abduction 3°, adduction 60° Under atropia + 50 C vert was still accepted, improved vision somewhat and no change was made Retinoscopic test under atropia was as follows With plane mirror at 40″ R both meridians — and both became + with — 25 L both meridians +, vertical reversed by + 25 and horizontal by + 50, a showing that ought to have suggested minus lenses to any man who was less under the power of authority—but Dr Hotz's ℞ of + 50 C vert was continued, and with muscular exercises the patient was made comparatively comfortable for another year, when he collapsed I had then made up my mind that I had been doing faulty work in these cases, so I examined him again and found that he would accept — 50 C hor , and that vision was decidedly better than with the plus glass He was given the new correction, and has been in better condition since beginning their use than for many years Several other patients have been given weak minus cylinders for whom in former years I had ordered plus cylinders, and with uniformly good results

As I have been writing, a lady came in and reported relief from the use of — 25 C hor She had been ordered by some optician + 75 S for work She could read with comfort, but the nervousness and sick headaches continued Under hom atropia the retinoscopic findings were as follows Horizontal and vertical meridians both eyes + Reversed in R by H + 1 25 and V + 1, in L by H + 75 and V + 50 These findings clearly indicate a minus quarter cylinder, and such a glass with axis 45° temporal was accepted and gives complete relief, in spite of the presence of a right hyperphoria of 1 5° A still later case is Mrs D , whom Dr Wurdemann of Milwaukee gave + 25 ○ + 25 C V , which gave relief for six months I find retinoscopic test to give in both eyes —, vertical reversed by + 25, horizontal by + 75 — 25 C 75° temporal improves distant vision, makes reading easier than with Dr Wurdemann's compound plus lenses, and also gives as much relief from the glare of lamp and sunlight as the tinted + 25 S given by Dr Bradford of Boston The mention of other oculists by name is in no spirit of criticism, but simply to show that other men, and competent ones, have been making these same mistakes

Edward J Brown, M D

"Parasite and Host"

Philadelphia, Nov 16, 1896

To the Editor —Your editorial entitled "Parasite and Host" in your issue of November 14 should be read, pondered and inwardly digested by every member of the American profession I can heartily subscribe to every word of it so far as relates to one publishing house It is, however, gratifying to know that medical publishers are generally not guilty of the (medical) sin you so justly stigmatize, and that as a rule they are either sufficiently courteous or politic to recognize their duty to the medical profession In this connection it is especially noteworthy that I have heard nothing of any disinclination upon the part of the one publishing firm which pays its contributors for articles published in its journals How *much* more astonishing therefore is the stand taken by our publisher who pays contributors nothing ("not even reprints "), that matter and illustrations of articles given him shall not be reproduced by another publisher! As a physician I would not edit a journal using unpaid contributions that refused physicians the right to reproduce their articles when and where they pleased As you pertinently observe, the object of a physician in publishing his article is to tell every medical man the results of his studies, but no periodical has a circulation more than one tenth of the total number of physicians of our country, therefore any other means that may arise for insuring a still greater publicity is desirable, and any attempt on the part of a publisher to limit the reproduction of articles gratuitously furnished him is clearly against the author's interest and that of medical science I cordially endorse your suggestion that in contributing to medical journals every writer make it a clearly defined and accepted stipulation that the right to reproduce the article and its illustrations shall be free to all

In editing the *American Year Book of Medicine and Surgery* every publisher but one has recognized the rights of authors and of the profession as regards abstracts, extracts and the reproduction of illustrations Curiously enough the one who refused this was one who pays its contributors nothing for their articles As it happened, also, some of these very articles first published in the journals of this firm were written by departmental editors of the *Year Book* Thus an author was refused the right of using his own article because he had first given it to a lay medical journal! The *Year Book* reaches thousands of readers that the journal can not expect to reach, and it will be remarkable if authors hereafter permit themselves to be caught in such a trap You are correct in suggesting to the profession that it should look more sharply after its own interests, and should encourage *journals of, for and by the profession* Cordially yours, Geo M Gould, M D

119 South Seventeenth Street

BOOK NOTICES

Important Notice Concerning Library Wants and Supplies

Notice to Medical Men, and Librarians of Public Medical Libraries

[Medical journals are requested to publish this notice]

1 All correspondence in relation to the enterprise should be addressed to Dr Geo M Gould, 119 S 17th Street, Philadelphia, Pa

2 Librarians of public medical libraries are requested to forward 1 Accurate lists of periodicals, books or pamphlets needed to complete their files 2 Lists of duplicates which they will give other libraries or exchange for numbers desired *Give both volume numbers and dates of periodicals*

3 Owing to the additional labor it would involve, queries concerning the supply of desired items to *private* libraries can not be answered

4 The conditions of all gifts are that the recipients shall be reputable organizations, composed of the regular medical profession, that the library shall be a public one, *i e*, open for consultation during stated times to physicians generally, and that, if unbound, the periodicals and books received shall be bound and catalogued

5 Every physician is invited to give the books and periodicals for which he has no further use to public libraries, and having no particular choice, to correspond with Dr Gould in reference to their disposal in order to secure the greatest usefulness by the profession

6 Send nothing before corresponding, in order that the gifts may go direct from the donors to their proper destination

7 In order to secure the best success, physicians and librarians of other countries are invited to coöperate

FOR PRESENTATION

Librarians needing any of the following volumes (all numbers inclusive) to complete their files are requested to apply for them

American Journal of Medical Sciences 1879 to 1890, except 1887 which is missing

American Medical Association, Reports and Transactions 21 odd volumes, 1847-8-53-55-56-66-68 to 76 and supplement volumes 1876 to 82

American Clinical Lectures, Vol 2 (1876)

American Medical Journal, 1884

American Medical Times, Vols 1 and 2 (1860-61)

American Public Health Association Reports, etc , Vols 1 to 17

One { Archives of Scientific Practical Medicine, Vol 1 (1873)
Vol } Chicago Medical Journal, Vol 28 (1871)

Boston Medical and Surgical Journal, Vols 94 to 99 (1876 78)

Braithwaite's Retrospect, Vols 50 to 89

Canada Lancet, Vol 8 (1876)

Chicago Medical Journal and Examiner, Vols 27 (1870), 33 (1876), 34, 35 (1877)

Cincinnati Lancet and Obstetrics, Vols 18 and 19 (1875-76)

One { Canadian Journal Medical Science, 1876
Vol } London Medical Record, part of 1873

Detroit Medical Review, Vol 10 (1875-76)

Gaillard's Medical Journal, Vols 46 and 47 (1888)

Journal of Nervous and Mental Diseases, Vol 3 (1876)

Louisville Medical News (in one volume), Vols 1, 2 and 3 (1876-77)

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British Journal of Dermatology—All before 1891, Vol 6, No 5

Canada Lancet, The—Vol 1, Vol 2, Vol 23, Jan Feb July, Vol 24, Oct, Vol 26, Sept, Oct, Nov, Dec, Vol 27, Oct, Jan, March and June

Canada Medical Record—Vol 2, No 4 and index, Vols 13 to 18, want index, Vol 19, Nos 6, 7, Vol 20, Nos 1, 2 Vol 21, Nos 2 to 12, Vol 22, Nos 1, 2, 3, 4, 5, 7, 8, 9, 10, 11

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College of Physicians, Transactions of the—All before 1879

Congress of American Physicians and Surgeons, Transactions of the—All before 1891

Deutsches Archiv fur klinische Medicin—Vol 54

Deutsche medicinische Wochenschrift—All before 1886, Vols 1891-93

Dominion Medical Monthly—1893, No 6, 1894, No 6

Edinburgh Medical Journal, The—Vol 16, Dec 1894, April, 1895, June, 1895

Gazette Médicale de Montreal, La—Vol 1

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Jahresbericht über die Fortschritte der Anatomie und Physiologie—Bd 12

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Journal de l'Anatomie et de la Physiologie—All before 1886

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Medical News, The—All before 1882

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Montreal Medical Gazette—Vol 1

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Ophthalmological Society of the United Kingdom, Transactions of the—Vols 1, 2, 3

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Therapeutic Gazette, The—All before 1881, Vol 14, Nos 5, 11 12, Vol 17 Nos 1, 2 3, 4, 8, 12, Vol 18

Union Médicale, L'—Vol 7, Nos 2, 8, Vol 8, No 12

Year Book of Pharmacy—All before 1870 and after 1880

Zeitschrift für Klinische Medicin—Band 4, Nos 3, 5, 6 Band 8, No 4, Band 9, Nos 10, 11, 12 Band 13, Nos 1, 6, Band 14, Nos 4, 5, 6

The Practice of Medicine By HORATIO C WOOD, A M, M D, LL D, and REGINALD H FITZ, A M, M D Philadelphia The J B Lippincott Co 1896

Anything emanating from the pen of two of the most distinguished American physicians, as these are, would attract attention, and this book, which has been prepared by perhaps our ablest pathologist and our ablest clinician, is one which will be a credit not only to the English language in which it is written, but to America, and will undoubtedly be received abroad as the highest type of an American production The style of the work is naturally somewhat dogmatic, but its careful condensation compensates for this, as there is nothing superfluous in the book from beginning to end A clean cut statement of the conviction of the authors and the state of their knowledge on the subjects treated is given

In the treatment of typhoid fever we notice that the book gives little space or consideration to the so called antiseptic treatment Indeed, it is not mentioned as such, although turpentine, one of the most robust antiseptics, is still adhered to by Dr Wood, as it was by his uncle who introduced it We notice with some surprise in the formulary in the appendix that the old dose system has been used, although Professor Fitz himself is a Boston man, it is the home of the American metric bureau, and the active center of its propaganda The book will remain a favorite for many years to come

A Text Book of Materia Medica, Therapeutics and Pharmacology By GEORGE F BUTLER, PH G, M D, Professor of Materia Medica and of Clinical Medicine in the College of Physicians and Surgeons, Chicago, etc Price, cl, $4, 8vo, pp 858 Chicago agent, W T Keener Philadelphia W B Saunders 1896

Dr Butler has produced a very creditable book, and one that in our judgment is destined to become popular The contents of the book include 1, pharmacology and general therapeutics, 2, pharmaceutic preparations, 3, disease medicines, 4, antiseptics 5, symptom medicines, 6, topical remedies

That too little attention to materia medica is given in these degenerate days we think there is no question, and although there are already several excellent works on therapeutics on the market, we are not likely to have too many We commend the author for having modernized his book by adopting the Romanesque pronunciation, and designating the precise orthoepy for all the names, for the use of the decimal system throughout and for having conveniently placed the genitive form after each official name These features will be of great use to students That the work is quite up to date is seen by the section on organo therapy and serumtherapy We are of impression that the French quotations, such for example, as the ones from Bernheim on pages 271 and 293 should have been translated into English, especially as there is a typographic error in the first Taken as a whole the book may fairly be considered as one of the most satisfactory of any single volume work on materia medica on the market

A Treatise on Surgery by American Authors For Students and Practitioners of Surgery and Medicine Edited by ROSWELL PARK, A M, M D Vol II Special or Regional Surgery with 451 engravings and 17 full page plates in colors and monochrome 8vo, cloth, pp 804 Philadelphia and New York Lea Bros & Co 1896

The contributors to Vol II are Drs Park, E H Bradford, Duncan Eve, D Bryson Delavan, Edmond Souchon, Frederick S Dennis, A D Bevan, M H Richardson, Farrar Cobb, Chas B Kelsey, W T Belfield, James H Etheridge, Chas B Parker, Rudolph Matas, Robert W Lovett, Arpad G Gerster, Chas S Bull and Clarence J Blake

The work is characterized by thoroughness of detail and breadth of general knowledge The many excellent works on surgery now on the market (International, Dennis' System, Moullin, American Text book, Treves) prevent our quoting this as the best, but there are few that surpass it in general utility The authors have done well in escaping the old rut, by providing so many original illustrations, and the publisher has given the text a handsome setting There is some unevenness between the articles, perhaps inseparable from joint authorship, but some of the chapters are of exceptional merit

The work as a whole compares favorably with other recent American works, and is a creditable addition to current medical literature

Medical Jurisprudence, Forensic Medicine and Toxicology By R A WITTHAUS, A M , M D , and TRACY C BECKER, A B , LL B , and a staff of collaborators In four royal octavo volumes Volume IV , Toxicology New York William Wood & Company 1896

The completion of this volume adds another magnificent work on jurisprudence to the already creditable list of American works on the subject

We have recorded our favorable opinion of the first three volumes of this series This volume, devoted entirely to toxicology, is not only equal to its predecessors, but in some respects the most interesting The chapter on the history of poisons, by way of introduction, is a credit to American medical literature

The practical value of this work has been much increased by the copious index at the end of each volume

Anatomical Atlas of Obstetric Diagnosis and Treatment By OSCAR SCHAEFFER, M D With 145 illustrations , 12mo, cl , pp 234 New York William Wood & Co 1896

This volume adds another useful volume to the excellent series of atlases published by this well known firm The book, says Dr Schaeffer, "deals with the morphology of the female pelvic organs as the anatomic basis of the physiologic and pathologic phenomena of pregnancy and labor " From this basis the diagnosis is deduced and the pathologic changes can be estimated The book is much more than an atlas, for the accompanying text is very instructive Gentlemen preparing for examinations will find the work invaluable, and practitioners will be able to refresh their obstetric knowledge with some additions by its perusal

Fourteenth Biennial Report of the State Board of Health of California, for the fiscal years from June 30, 1894, to June 30, 1896 Also, the Transactions of the Fourth Annual Sanitary Convention held at Los Angeles, April 20, 1896 Sacramento A J Johnston, Superintendent of State Printing 1896

There are more voluminous reports than the one under consideration but there are few that show more intelligent supervision of public health In addition to the statistic tables showing the mortality of various diseases throughout the State, there are special reports from committees appointed to investigate various public institutions, and the papers read at the annual State sanitary convention Dr W F Wiard of Sacramento is president and Dr J R Laine of Sacramento is secretary

Transactions of the Texas State Medical Association, Twenty eighth Annual Session, held at Fort Worth, Texas 1896 Paper, pp 470 Printed for the Association 1896

This handsomely printed volume tells a pleasant story of the great activity of the Texas profession in medical progress and the advancement of science The business features of the meeting were mostly of local interest, although we notice resolutions reaffirming their adhesion to the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION and favoring the transfer of the State quarantines to the National Government The papers are of a high order , among those of home production we notice articles respectively by Drs J M Cline, A H Schenk W R Blailock H L Tate, David Cerna C O Matthews Lawrence Ashton, J J Williamson, W M Yater, J E Gilchrist W J Lane, Z T Bundy, Henry P Cookes, F E Daniel, T J Bell, R R Walker, A W Fly, F S White, J Aloysius Mullen, J O McReynolds, H L Hillgartner, E J Mathery, G W Grove, R F Miller V H Hulen, Geo H Lee and R W Knox Authors from New York, Philadelphia, New Orleans and elsewhere, contributed to the volume, which has been carefully edited by the accomplished secretary, Dr H A West of Galveston

Twenty seventh Annual Report of the State Board of Health of Massachusetts Bds , pp 808, 8vo Boston 1896

The annual reports of this Board have always taken the front rank among publications on sanitary subjects Indeed it is not too much to claim for this Board that from its beginning in 1870 the reports issued have served as a model The routine work as set forth in the current volume shows that the cities and towns of the Old Bay State appreciate the work of their Board of Health, and have year by year learned to depend more and more upon their advice in all matters affecting their respective municipalities Nor is this aid to municipalities the sole good accomplished , every year some new topic of public hygiene is made a prominent feature of the report, with the effect of materially adding to our knowledge of the subject Last year it was water filtration and the results of the experiment stations, and this year the accounts are continued A favorable judgment of the use of diphtheria antitoxin is recorded, based on abundant observations The experiments upon the purification of sewage at the Lawrence have been continued The Massachusetts commonwealth is really benefiting the other States by the maintenance of this now famous station almost as much as herself Those interested will find careful studies of the question of the permanency of sewage filters, the best modes of management to secure this permanency, the preliminary treatment of sewage by different methods to remove sludge before filtration, and different methods of aerating sewage filters to secure the greatest efficiency, and as well discussion of the methods of utilization of sewage for industrial purposes

Transactions of the Fifty first Annual Meeting of the Ohio State Medical Society, held at Columbus, May 27, 28 and 29, 1896 Cl , pp 492 , 8vo Toledo

The volume has as a frontispiece an excellent picture of the president Dr Daniel Millikon of Hamilton, whose presidential address was replete with sound advice The addresses are excellent and some of the papers admirable Obituary notices of Drs Wm S Battles, T J Barton, Henry C Beard, C G Comegys, T M Cook, Joseph Price and W J Scott are included in the volume A copy of the new act to regulate the practice of medicine in Ohio, a list of members and a good index complete the volume

The volume has been carefully edited by the secretary, Dr Thomas Hubbard of Toledo

Transactions of the New Hampshire Medical Society, at the 105th anniversary held at Concord, June 1 and 2, 1896 Cl , pp 202, 8vo Concord, N H

One of the entertaining features of the New Hampshire Medical Society is the annual dinner and the excellent postprandial speeches In this particular few medical societies surpass that of the Old Granite State Nor are the scientific needs of the meeting in any way neglected The president's address (Dr McQuesten) is instructive and the address of Dr Gore with the discussion thereon by Dr Conn and Dr Hiland constitute an important contribution to climatology

The next meeting of the society will be held in Concord the last week in May, 1897, under the presidency of Dr A P Richardson of Walpole

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Preservation of Human Heads —The *Journal D'Hygiène* of October 29, describes a simple process by which the savages of New Zealand prevent decomposition and keep as trophies the heads of their enemies in a perfect state of preservation It suggests that a most interesting collection of specimens of the different races of the world might be made by this process for the practical study of ethnology

NEW INSTRUMENTS

A MODIFIED DIRECTOR

BY E R LARNED

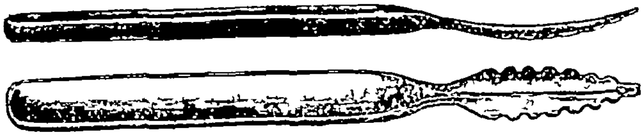
CLASS OF '97, RUSH MEDICAL COLLEGE

For the purposes of blunt dissection, no surgical instrument is so universally used as the grooved "director" devised by Professor Kocher of Berne, and yet it does not fully meet all the requirements of the general surgeon

The writer does not claim perfection for this modified instrument, but believes that the alterations from the original have added very largely to its usefulness

These changes consist in having the entire instrument made from one piece of metal (the handle portion being concave on two sides to decrease weight) for it is obvious that a solid instrument will not make as many visits to the repair shop as the one with a soldered hollow handle

The blade has been made longer, more curved and much thinner than the ordinary director to facilitate working *around* glandular structures, in vascular regions, particularly in operations for the enucleation of tubercular and carcinomatous glands, and in the inguinal regions where thin walled abscesses are likely to be punctured in the use of the knife



The principal modification will be seen to be the serrations in the edges of the blade, which may vary in number and size to suit individual preferences as well as the length and width of the blade

The purpose of these serrations is to enable the operator to use a sawing or tearing motion, increasing his power in separating tissues and breaking down adhesions, obviating still further the use of the knife after the initial incision

The blade is grooved to guide the knife when it must be used (as in dividing the sterno cleido mastoid muscle in enucleating deep cervical glands), one groove is substituted for the three in the ordinary instrument, doing away with two unnecessary grooves and permitting greater thinness of the blade without diminution of its strength

A fenestra at the tip of the blade as in Kocher's latest pattern permits its use as a ligature carrier—so that when necessary, vessels may be tied speedily without the aid of an aneurysm needle or regular ligature carrier Directors without fenestrae may be obtained

The instrument illustrated was made by Messrs Drake & Mueller, 266 Ogden Avenue, Chicago, from the writer's model and was suggested by witnessing the frequent use of Kocher's director in the multitude of operations seen during three years attendance upon the surgical clinics of Rush Medical College, and by the statements of surgeon friends

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A NEW GROOVED ASPIRATOR NEEDLE

BY J A DIBRELL JR M D

PROFESSOR OF ANATOMY, ARKANSAS INDUSTRIAL UNIVERSITY MEDICAL DEPARTMENT

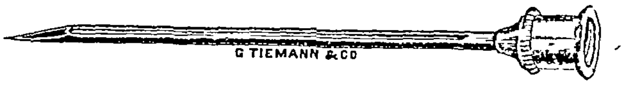
LITTLE ROCK ARK

In a case of suspected pelvic abscess, I introduced an aspirator needle for diagnostic purposes, and finding pus, I incised the vaginal mucous membrane at the base of the needle with the intention of conducting along the round needle a director, and in the groove of this instrument a narrow scissors with the view of so dilating the opening that I could insert a drainage tube, irrigate and secure drainage

Though the director was rather sharp pointed, the result was to push it out of the abscess wall

It occurred to me that an aspirator needle could be made with a groove like a director for use in similar cases, and when the presence of pus or other accumulations are found, that the grooved director needle could be used without removal, to conduct a knife, scissors or other instruments for dilatation, and the introduction of drainage tubes

I submitted a design and description of the needle to be made, to George Tiemann & Co, of New York City, who made the needle for me which is represented in the folowing cut



The needle can be made of any size

There are many conditions beside pelvic abscesses which will suggest themselves to the surgeon, in which such an instrument may be convenient, in accumulations in the pleural cavities for example

There are also hepatic abscesses in which there are sometimes chunks of necrosed hepatic tissue too large to pass through any aspirator needle or trocar, and in which drainage becomes a necessity

SOCIETY NEWS

The Western Surgical and Gynecological Association —The fifth annual meeting of the Western Surgical and Gynecological Association will be held at Topeka, Kas, Monday and Tuesday, Dec 28 and 29 We desire to extend to all regular physicians and surgeons a cordial invitation to be present and take a part in the proceedings Topeka is a delightful city, noted for its hospitality and the local profession have arranged for our entertainment A strong program is assured Opening session at 1 P M, December 28 H E Pearse, M D, Secretary

Association of Assistant Physicians of Hospitals for the Insane The fourth meeting of this association will be held at the Eastern Michigan Asylum, Pontiac, Mich, on Dec 3 and 4, 1896 IRWIN H NEFF, Pontiac, Secretary

NECROLOGY

CHARLES M KITTREDGE, M D, of Fishkill on the-Hudson, N Y, died suddenly at Mount Vernon, N H, on August 19 His death is believed to have been due to apoplexy He had been in poor health and his case had been considered as very serious He was suffering from Bright's disease, and he passed through a severe and dangerous attack from that malady in June He left for New Hampshire on June 23, accompanied by his children, to spend the summer months in his native town, in hopes of gaining strength among the New Hampshire hills Dr Kittredge had been no worse since he left Fishkill and it could not be said that he had improved in health Dr Kittredge was born at Mount Vernon 58 years ago He spent his boyhood days there, finally taking up the study of medicine, after a liberal academic education He graduated from Howard Medical College in 1867 He went to Fishkill twenty six years ago but previous to that he had been in the Hartford Retreat, an institution for the treatment of nervous diseases At Fishkill on Hudson he established a home for nervous people, which comprised a beautiful estate Dr Kittredge took a great interest in his home, and he had one of the most beautiful and complete places in that town He was one of the most prominent and best known citizens and was largely identified with all the movements to promote the welfare of the town No one knew him but to like him and we believe that everybody was his friend As a physician he had a prominence and he was a successful *practit* *ou* he did not care for an extensive practice, as h to look after Dr Kittredge was one of our well known base singers and his excellent voice was often heard at the church concerts and at funerals His wife died three years ago Dr Kittredge took a great interest in military matters He served in the late war, enlisting in Company B, 13th Regiment Volunteers, of New Hampshire, Sept 18, 1862 He enlisted as first sergeant and was promoted on March 26, 1863, to second lieutenant

J S Wintermute, M D , of Tacoma, Wash , was shot by an insane patient on the morning of November 10, the bullet passing through the abdomen making six perforations of the intestines The abdomen was opened and the bullet wounds in the intestines stitched up, but he died a few moments after leaving the operating table James Stinson Wintermute was born April 27, 1860, at St Paul, Minn His boyhood years were spent in Canada, he entered the University of Michigan in 1879 and graduated at Rush College, Chicago, in 1883 Dr Wintermute went to Tacoma, Wash , in 1884 and soon took a place in the front rank of the physicians in this city He was married in 1888 to Miss Florence K Jones of Olympia, and one son survives him Dr Wintermute has paid special attention to surgery and his practice in this line during the good times was a very lucrative one and he also accumulated quite a sum from fortunate real estate transactions He was a member of the Pierce County Medical Society and also of the Washington State Medical Society

Dr George W Betton died at his home in Tallahassee, Fla , on All Saints Day, Sunday Nov 1, 1896, after a short illness He was born in Alexandria, Va , on Feb 22, 1822, and at the early age of four, before the days of railroads, he came with his parents to Florida on board a sailing vessel and landed on the Gulf Coast at the port of St Marks In 1842 he was graduated as Bachelor of Arts from St Johns College, Annapolis, Md He next attended lectures at the University of Pennsylvania at Philadelphia, and on the 4th of April 1845 received the degree of Doctor of Medicine from that time honored institution Although in his 74th year at the time of his death he still continued in active practice of his profession of medicine which he had followed for more than forty years

PUBLIC HEALTH

Etiology of Typhoid Fever—The epidemic at Rheims among the dragoons was traced unmistakably to the dust stirred up by their evolutions, and Uffelmann's experiments demonstrate that the dried typhoid bacillus as also the cholera microbe can be disseminated in the air, and thus alight in dust on articles of food Similar experiences are reported from Belgium as the cause of the present slight epidemic at Tirlemont These facts tend to show that the water supply is not always to blame in epidemics of typhoid fever —From *Journal d'Hygiène*, October 29

Epidemic of Scarlet Fever in Brazil—Dos Reis describes in the *Gazeta Méd da Bahia* a recent epidemic of scarlet fever in Curityba, lasting almost a year He had himself over five hundred cases in his practice The disease was unusually severe in its manifestations, with many deaths and cases of consecutive paralysis and nephritis More adults were attacked than children under 10 and it was more serious with them He describes his treatment in detail, with which he was very successful, stating that the only deaths among his patients 4 per cent. were those whom he saw for the first time in an advanced and most critical stage

The Garbage Question at Baltimore—The following comments by the *Baltimore Herald* indicate how civic work is sometimes done, only to be done over again "The agitation of the problem how to dispose of garbage in the most economical and satisfactory manner has borne fruit in the appointment of a special committee from the city council, which will visit various cities to study the methods in vogue there, and report the results of the investigations Whether this is the most practical way of ascertaining what is the best method may be questioned Men without special knowledge of the subject are hardly in a position to perceive and weigh the relative advantages of the several systems in vogue, special study being required to arrive at an intelligent comprehension of details At the same time, however, the disposal of garbage otherwise than by dumping it in some more or less remote place has passed the stage of experiment Reduction or incineration plants are being successfully operated in nearly all progressive cities Not only do they dispose of the waste material which would otherwise contaminate the soil or pollute water courses but they make possible a considerable reduction in the expense of removal The products of incineration or reduction, unlike when offal is merely carted away and dumped, have a commercial value which, in some instances, not only covers the cost of the processes, but leaves a margin of profit The principal consideration, however, is that such disposal removes a grave menace to health In Baltimore garbage is collected, loaded on scows and carried some distance down the river to be dumped into the water Aside from the wastefulness of the proceeding, the decomposing vegetable and animal matter helps to fill up the ship channel and becomes a menace from a hygienic standpoint "

A Sanitary Triumph, Swill feeding Enjoined at Philadelphia—The Board of Health of Philadelpia has been waging war since February last against the use of the city's garbage for the feeding of pigs at points a short distance beyond the city limits This matter culminated on October 17, at a trial in the court of common pleas The bearing of this proceeding is stated as follows in the October issue of *Public Health*, and is held to be a victory for sanitation in the State at large "This was an application for an injunction to restrain the defendant from collecting kitchen garbage and offal in any part of the city, from carrying it through the streets of the city, and then disposing of it to hogs, or by spreading it upon lands in the city or adjoining it The allegation was that of collecting garbage and conveying it to a farm in Delaware County, near the county line, where he fed it to hogs, that he had no contract with the city for the collection of garbage, nor any license or permit from the Board of Health, that this course of conduct was in violation of the ordinances of Councils and the regulations of the Board of Health, that it was liable to prejudice the public health by reason of the bad odors which were carried from the farm to the city, and the probable sale of the unwholsome flesh of such fed hogs in the city The defendant's answer consisted of admission of fact and denial of matters of law, and after arguments the court granted the injunction asked for by the city When the case was called it was found that a cross suit had been brought asking for a mandamus to compel the Board of Health of Philadelphia to grant these parties a permit to conduct the business in any way that seemed good to them The court held that the Board of Health of Philadelphia was established for the express purpose of deciding questions of this kind, and that, should the court grant the mandamus it would be usurping the functions of the Board and itself issuing the license, or that, in other words, the court would be substituting itself for the Board The effect of this decision will be very far reaching and will strengthen the position of every board of health in the State "

A Low Rate of Mortality—The monthly statement of the Board of Health of the State of New York, for September, shows the low rate of mortality for the whole State of 17 5 per mille Of the cities having 100,000 population or over, Rochester had 13 2, Buffalo 13 8, Syracuse 14 0, Brooklyn 18 2, Albany 18 6, New York City 18 7, respectively There were

500 fewer deaths reported than in the corresponding month of last year Among zymotic diseases the only material difference from the mortality of September, 1895, is in diarrheal diseases, from which the number of deaths is less by 600, the mortality from all diseases of the digestive organs is diminished Acute respiratory diseases caused 150 more deaths, and from diseases of the circulatory system there were 100 more deaths than a year ago, from other local diseases as also from consumption and constitutional diseases there was no material variation There were 800 fewer deaths under 5 years of age Compared with the preceding month of August, the total reported mortality is decreased by 3,000, the deaths under 5 years of age being fewer by 1,200 Among zymotic diseases, the diarrheal mortality was not half as large Typhoid fever, malarial diseases and diphtheria show an increase, whooping cough a decrease Acute respiratory diseases have increased, all other local diseases diminished, and the deaths from accidents and violence, under which was placed last month a number from sunstroke, have fallen to the normal The death rate from all causes is 17 50 against 23 25 in August and 18 50 in September last The percentage of infant and zymotic mortality are respectively 36 0 and 19 75 against 49 0 and 24 65 in August, and 41 5 and 25 0 in September last The September prevalence of typhoid fever is excessive in the Hudson and Mohawk Valley districts and in the Southern Tier and East Central districts, the percentage of deaths from typhoid fever in urban parts of the State was 2 0, in rural parts of the State 3 66 Diphtheria increased a little from August, but caused fewer deaths than in September of any year for ten years, in cities and villages it caused 3 50 per cent of the deaths, in rural parts of the State, 1 57 per cent. Scarlet fever continues to cause few deaths, but is more widely distributed than in August

Illinois Vaccine Establishment—The following is Dr Cook's report

MENDOTA, ILL, Oct 30, 1896

To B. M Griffith, M D, President Illinois State Board of Health.

Dear Doctor—In compliance with your request, conveyed to me by letter of the 22nd inst, from Dr J W Scott, Secretary of the State Board of Health, I visited Urbana on the 26th inst, and, as desired, inspected the State Vaccine Propagation Station established in connection with the veterinary department of the Agricultural College of the State University

By an Act of the Legislature, approved June 15, 1895, in force July 1, 1895, it was made the duty of the Trustees of the University to establish and manage "a laboratory in connection with the State University for the propagation of pure vaccine virus" It was provided in said Act, "That the State Board of Health shall exercise supervision of the methods of propagation and certify to the purity of all products"

In the interest of public health provision was thus made by the State to put in operation a vaccine propagation laboratory, to be equipped with all of the modern appliances, and under most approved conditions to produce a vaccine virus of such purity and effectiveness that the medical profession and the public could be assured of its safety and potency to prevent one of the remaining scourges of humanity—smallpox We need not recite what is so well known, namely, the very great importance of knowledge, skill and conscientious care in all the details to be followed in providing an agent so valuable as a preventive of a loathsome disease And further fact that its wider usefulness will be much advanced by increasing confidence on the part of the medical profession and public in the purity and reliability of the virus thus produced It is to be regretted that the commercial spirit—the question of profit accruing to private parties—has so dominated its production as to cause want of confidence in the purity and safety of much of the vaccine virus on the market Prompted by that knowledge, and actuated by the desire to advance a great public sanitary interest, the Legislature, at the suggestion of the State Board of Health, made provision for the establishment of a propagation station in connection with her great University, feeling confident that the work would be in hands in every way competent and reliable, fully informed in all the recognized methods and free from the trammels of desire for pecuniary gain

We have the pleasure of reporting that every facility was given us to inspect thoroughly the State Vaccine Laboratory We were fortunate in meeting and being aided in our examination by two members of the faculty of the University who have taken especial interest in and have given much personal attention to all the details necessary to equip and manage the Laboratory We refer to Dr Thomas I Burrill, Vice President Dean of the General Faculty, and Professor of Botany and Horticulture, and Dr Donald McIntosh, V S, Professor of Veterinary Science, who is in charge of the Laboratory These gentlemen are eminently competent, by reason of scientific attainments, to accomplish the work assigned to them and impress one with the thought that their desire and effort is to produce a product the purity and reliability of which can be certified by the State Board of Health

We indorse the following extract taken from a recent circular letter sent out from the Laboratory "The Laboratory, an isolated building to be used for no other purpose, has been provided and properly equipped to attain the purposes of the law The most careful attention has been given to everything which can facilitate freedom from contamination The ceilings, walls and floors of the operating and animal rooms are so finished that they can be frequently washed with hose and scrubbing brush and thoroughly disinfected A crematory is provided for burning all litter and other organic matter None but animals bred by the university, or of well known parentage and selected with great care will be used Everything is being done to secure bacterial cleanliness and insure the preservation of the virus in a state of reliable purity"

Careful examination verified the correctness of the above statement The building had been constructed for and used by the veterinary department Some necessary changes were made in its arrangements, adapting it very well to the purpose of a vaccine laboratory It is very pleasantly located in a grove nearly equidistant from University Hall and the buildings on the university experimental farm In its exterior it has the appearance of a neat cottage, being extended in one of its dimensions by that part of the structure that is the temporary home of the juvenile bovines, in whose living laboratory is produced the animal immunizing agent—vaccine virus The grounds, like all others about the university, are neatly kept. The interior of the building is pleasing It is a model of neatness, with office, operating room and room adjoining, equipped with modern facilities for sterilizing, etc The rooms for the heifers—we can not call them stalls—are convenient, well lighted and ventilated The degree of cleanliness of all approaches very nearly that of one of our modern hospitals The heifers selected are the best obtainable and their care and treatment the best possible Their preparation for inoculation, the operation, subsequent care and process of securing and preserving the lymph are as aseptically done as possible We only need to add that Sec 3 of the Act establishing the laboratory reads "That the product of the vaccine laboratory shall be furnished all physicians and health officers within the State at the cost of propagation"

Permit us to say that it is a great satisfaction to know that this, the first effort on the part of the State to produce and supply the people with an agent of universal value in preventing a terrible disease promises to be so successful, and that the money thus appropriated has been wisely expended We can but feel that this and other kindred interests relating to the public health and the prevention and cure of disease appeal to our legislators for generous appropriations Other States have demonstrated the feasibility and good results of establishing and sustaining laboratories for the production of antitoxin in the interest of public health EDGAR P COOK, M D

Health Report—The following reports of mortality from smallpox, cholera and yellow fever have been received in the office of the Marine Hospital Bureau of the Treasury Department

SMALLPOX—FOREIGN

Athens, May 1 to 31, 7 cases, 1 death June 1 to 30, 5 cases, 1 death, July 1 to 31, 1 case, 1 death, August 1 to 31, 4 cases
Alexandria, July 23 to 29, 1 death
Barcelona, September 1 to 30, 15 deaths
Birmingham, October 17 to 24, 1 case
Cairo, July 23 to 29 3 deaths
Gibraltar, October 11 to 18 2 cases
Havana October 15 to 29, 470 cases, 69 deaths
Licata, Italy, October 10 to 17, 5 deaths
Liverpool October 10 to 17, 1 case
London, October 10 to 17, 2 cases
Montevido, September 19 to Oct [illegible] 10 [illegible] 3 deaths
Mozambique, August 1 to 31 1

Odessa, October 10 to 17, 16 cases, 3 deaths
Rio de Janeiro, September 26 to October 3, 10 cases 1 death
St Petersburg, October 10 to 17, 13 cases
Tuxpan, Mexico, October 10 to 17, 4 deaths
Warsaw, October 3 to 17, 13 deaths

CHOLERA

Alexandria, July 23 to 29, 24 deaths
Bombay, September 30 to October 6, 11 deaths
Cairo, July 23 to 29, 11 deaths
Calcutta, September 19 to 26, 4 deaths
Madras, September 26 to October 2, 8 deaths
Yokohama, October 2 to 9, 2 cases, 2 deaths

YELLOW FEVER

Havana, October 15 to 29, 345 cases, 128 deaths
Matanzas, October 21 to 28, 10 deaths
Rio de Janeiro, September 26 to October 3, 5 cases, 1 death
Sagua la Grande, October 10 to 24, 168 cases, 13 deaths

MISCELLANY

Customs of Russian Doctors—The Russian physician, the *Record* says, considers it beneath his dignity to send a bill to a patient, but leaves it to the patient to pay what he thinks proper Many think it proper to pay nothing Are you acting the Russian in business matters? If so neither free silver, free gold, nor anything can save you from financial distress—*Kansas City Medical Index*

Illinois State Board of Health—At the last meeting of the Illinois State Board of Health the "Illinois Medical College" was given further time in which to complete its equipment of the school, in order to obtain recognition, it has not yet been recognized The "Dunham" Medical College (homeop) was given time in which to complete its equipment The "Harvard" Medical College was given authority to change its name to that of the Jenner Medical College

Commission to Investigate Charitable Interests—A resolution was passed by the legislature of Massachusetts at its recent session providing that the governor, by and with the advice of the council, appoint a commission, consisting of three persons, to investigate the public charitable and reformatory interests and institutions of the State, to inquire into the expediency of revising the system of administering the same and of revising all existing laws in regard to pauperism and insanity, including all laws relating to pauper settlements, and furthermore to inquire into the relation of pauperism and insanity to crime, with a view to securing economy and efficiency in the care of the poor and insane in the State The commission is authorized to employ a stenographer and is given power to send for persons and papers, and to incur such expenses and receive such compensation for their services as the governor and council may determine It is to submit its report, with a bill or bills, if practicable, to the governor and council before the first day of February, 1897

Early Aid for Injured Employes—The number of indemnities paid to injured employes in Berlin has dropped to about one third since the practice has been adopted of taking charge of them with trained attendance from the start, and thus preventing the development of serious complications The number of deaths has also decreased in proportion The patients are restored to their work in the shortest possible space of time, and it is calculated that many thousands of dollars have thus been saved to the corporations which insure their employes against accidents The *Journal D'Hygiène* of October 22, contains the report presented at the recent Samaritan Congress at Berlin The ten "emergency stations" for first aid to the wounded, that were established by the corporations, are open also to the general public as the city allows them an annual appropriation of 1,000 marks During 1895 they took charge of 13,856 injured persons 7 508 belonging to the corporations Over one half the rest were too poor to reimburse the corporations for the expenses incurred on their behalf

Deformity Producing Shoes—According to a recent article in the *Boston Med and Surg Reporter*, the ability to walk erect which distinguishes men from the lower animals, is menaced by our present fashions in foot gear The writer evidently thinks it useless to combat the styles of shoes in vogue among adults, but he makes a vigorous appeal to have the feet of our children preserved from deformity, by supplying them with hygienic foot covering He hopes that by the time they have attained maturity the fashions in shoes will become more sensible and urges in the meanwhile that their shoes should be constructed on scientific principles The sole of the shoe should not taper toward the toes, but should be broadest at the base of the toes, and continue broad or even wider to the tip, instead of compressing and utterly ignoring the functions of the fore part of the foot, as is the present custom He thinks that the pointed toes worn so much recently by adults will result finally in serious senile troubles

Valid Warranty Against Suicide—A warranty in an application for life insurance that the insured will not die by his own hand, whether sane or insane, the United States circuit court holds, in the case of Kelley v Mutual Life Insurance Company, decided August 25, 1896, is valid It had been contended that the warranty, in so far as it attempted to control the acts of the insured while insane imposed an impossible condition upon the contract, which was at the time of its execution known to be impossible, and was therefore void But the court maintains that the clause should be construed in accordance with the announced general principles of construction, and that, under the situation, the warranty became of the force and effect of a promissory one, or stipulation to be performed, exempting from liability on the policy upon substantial breach thereof

Allowable Use of Copyrighted Works—According to the decision of the United States circuit court, N D California, handed down, in the case of Simms v Stanton, June 25, 1896, what the law seeks to prohibit and to punish is the use of any part of a previous (copyrighted) book, animo furandi, with an intent to take for the purpose of saving oneself labor It says that a copyright gives no exclusive property in the ideas of an author These are public property, and any one may use them as such An author may also resort with full liberty to the common sources of information, and make use of the common materials open to all But his work must be the result of his own independent labor Copying is not confined to literal repetition, but it includes also the various modes in which the matter of any publication may be adopted, imitated, or transferred, with more or less colorable alterations, to disguise the piracy If such use is made of a previous work as to substantially diminish its value, or the labors of the original author are, to a material degree, appropriated by another, such use or appropriation is then deemed sufficient in point of law to support a suit for infringement of copyright What would be a "fair use' in one case might not be in another In determining this question, courts often look more to the value of the matter pirated than to the quantity A controlling factor, which, among others, influenced the court in determining this particular case, was that both authors were writing on the same subject It is difficult, it says, to conceive how writers on the same art or science can very well avoid resorting to the same common source of information and using the same common materials, and also in employing similar expressions and terms peculiar to the subject they are treating of And it expressly holds that a writer of a work on physiognomy, which it thinks is an art, or approximates to a science, did not violate the copyright law, in consulting and using another s works on that subject, it having been done without drawing from them to a substantial degree, though there were parallelisms, errors and repetitions, suggesting servile copying from the works of the com plaining author, some of which were explained by evidence that certain features common to the rival works had been obtained from other common and permissible sources

Primary Sarcoma of the Vagina in Early Life —Mr D'Arcy Power, in the *St Bartholomew's Hospital Reports*, 1896, records a case of this nature The patient was somewhat more than 2 years of age when she first came under the care of the surgeon Mr Power refers to twenty four other cases collected in a rather hasty examination of the literature From a consideration of these cases he concludes that primary sarcoma of the vagina is only a specialized form of malignant disease which may effect any or all of those connective tissues which are involved in the complicated development processes associated with the formation of the cloaca The sarcoma grows in the connective tissue of the pelvic organs and extends into the bladder, the urethra, the uterus or the vagina It is either well circumscribed as in the case described, or is diffuse as in a case reported by Ahlfeld (*Archiv f Gynäkol* , Bd xvi, p 135), but whether circumscribed or diffuse, whether affecting the vagina alone or infiltrating all the neighboring organs, this form of sarcoma shows an almost constant tendency to become polypoid and multiple As it occurs in children primary sarcoma does not, in the majority of cases, run a very rapid course It does not ulcerate very readily It does not usually affect the lymphatic glands It does not disseminate, but its prognosis is very grave It recurs quickly after removal, and it kills by interfering with the action of the pelvic organs, by retention of urine more often than by obstruction of the bowels The diagnosis is easy, but the polypi are often looked upon as innocent growths, and their true nature remains unrecognized until the presence of a tumor in the pelvis shows that it is too late for surgical interference Multiple polypi of the rectum and of the genito urinary tract in young people, however, are so rare, and when they do occur, are so often associated with malignant disease, that their presence should always lead to a suspicion of such a condition The complete cure has been effected in one or two cases of primary sarcoma of the vagina in children shows that the early and complete removal of the growth may be effectual in this as in other forms of malignant disease

Construction of Representations to Medical Examiner —In an action to enforce the collection of a policy of life insurance payment was resisted on the ground that there had been misrepresentations made by the insured to the medical examiner which constituted a breach of the warranty contained in the policy Among other things, the insured had stated that he never had any disease of the bladder , that he never had any disease of the skin , and that he never had any disease of the urinary organs Relating thereto, the jury were charged that a mere temporary ailment of the kind named would not constitute the diseases named as contemplated in the questions and answers given In construing policies of insurance, it was further said that it must be generally true that, before any temporary ailment can be called a disease, it must be such as to indicate a vice in the constitution, or be so serious as to have some bearing, at least, on the general health and continuance of life, or such as, according to common understanding, would be called a disease , that the legal meaning of all or nearly all of the questions referred to had in one way or another been fixed by law , that in finding a verdict as to whether or not the answers to them were true when made they should be considered from and under the meaning given to them by the court , that the term "serious illness" means such illness as is likely to impair permanently the constitution, and render the risk more hazardous , and that "addicted to the use of chloral" means habitual constant use of it These instructions, the supreme court of Tennessee holds, in Rand v Provident Sav Life Assur Soc , decided Sept 26, 1896, accord with the authorities and correctly state the law When the applicant says that he has never had any "serious illness," it adds, the courts will construe the meaning to be that he has never been so seriously ill as to permanently impair his constitution, and render the risk unusually hazardous

Connection Between the Cortex and the Labyrinth —Ewald has found by experiments on dogs that the auditory nerve performs more than the mere auditory function and therefore suggests that this name is misleading, and that it would be better to call it nervus octavus instead He states that if the labyrinth is destroyed in a dog the animal loses the coordination of its movements, is unable to stand up, to walk, etc , but in the course of a few weeks these disturbances pass away, and the missing functions seem to be fully compensated in some way The same phenomena occur if the other labyrinth is also destroyed , in time the animal learns to move as usual, even to run and jump Similar results are produced by destroying on one side only the "excitable zone" in the cerebrum for the movements of the fore and hind legs , the dog learns in time to run and jump as nimbly as ever, even in the dark But if later the remaining half of the "excitable zone" is also removed, then intensely severe and permanent disturbances follow The animal can neither stand nor walk , he can not lie down on his breast or belly, only on his side, and in spite of the most strenuous efforts, he can not get up on his feet He is still able to move his head, and uses it to propel himself He gradually learns in time to use his extremities by purely reflex action, but is unable to make a single voluntary movement, and even the reflex movements are impossible in the dark He loses control of his movements completely if taken into a dark room, and tumbles helpless to the floor , but after the room is lighted he regains control of his movements and is able to move as before Ewald considers that this throws a new light upon the connection between the sight and the locomotor function The proof of the extra functions of the nervus acusticus is therefore the diminished muscle power in the animal after the nerve is severed , also the lack of precision in its movements , also the lack of muscle sense, shown by the vertigo The influence of the auditory nerve on the striated musculature is explained by the presence of the ciliated cells in the labyrinth, which produce uninterrupted excitation of the central nervous system As the severed auditory nerve does not grow again, the explanation of the disappearance of the disturbances must be that its functions are substituted by other organs The sense of touch substitutes the function of the labyrinth, as is evidenced by the fact that the coördinating power is not totally abolished until the entire "excitable zone" in the cerebral cortex is removed The "excitable zone" and the labyrinth are able to substitute each other, and the same is true of the muscle sense and the sense of touch This explains the comparatively slight motor disturbances in persons with injured labyrinths —*Deutsche Med Woch* October 22

Liability of Counties in Emergency Cases —Section 24 of the Illinois Pauper Act provides that "when any non resident, or any person not coming within the definition of a pauper, of any county or town, shall fall sick, not having money or property to pay his board, nursing and medical aid, the overseer of the poor of the town or precinct in which he may be, shall give, or cause to be given to him, such assistance as they may deem necessary and proper, or cause him to be conveyed to his home subject to such rules and regulations as the county board may prescribe , and if he shall die, cause him to be decently buried " By this, the appellate court of Illinois, for the third district, holds, in the case of the County of Madison v Haskell, decided Dec 6, 1895 (63 Ill App 537), that the legislature made it absolutely obligatory upon the county to make all necessary and proper provisions for extreme cases, such for example as where persons, who are not paupers, are seriously burned by an explosion of oil when congregated at the scene of a railway accident It can not avoid the liability so imposed, by its failure to appoint necessary agents or prescribe regulations as to the manner of doing it If the defense is that the provision was not made, or not furnished in accordance with the rules and regulations prescribed by the board of supervisors, it is incumbent on the county to show that the county board prescribed reasonable rules and regulations on the subject, and what they were Any rule or regulation of the county board which would have required a moment's delay on the physician's part, in such a case as that under consideration, if he had been informed of it, and that the overseer of the poor was within speaking distance, the court goes on to declare, would have been unreasonable, and he unworthy of a place in his profession if he had thought of it before acting These people were entitled to medical aid if it could be had, on the instant and at the county's expense Accordingly, the court affirms a judgment for services and materials furnished in favor of a physician who had those injured in this case conveyed to a hospital, in a neighboring city, of which he was a regular physician and surgeon, and where he afterward rendered the services in question, attending them In the companion case of the County of Madison v Halliburton, which has just been reported in 64 Ill App 99, the court further holds that the fact that the physician seeking to recover for services rendered under such circumstances is employed as the county physician, and paid an annual salary, will not prevent him from maintaining his action, his contract, though only verbal, covering the cases of the county "poor" only, his purpose in this case being to recover for the treatment of other than poor persons

Hospitals

The dedicatory exercises attending the opening of the new Post-Graduate Medical School and Hospital in Chicago were held November 7 The hospital was formerly on West Harrison Street, but was found to be inadequate The new building is well equipped and fitted up according to modern designs The ceremonies consisted of a surgical clinic held by Dr L L McArthur, which was followed by a gynecologic clinic by Dr Albert Goldspohn A well attended evening reception was given by the faculty, which was followed with an address by Dr Theodor Klebs on the future of the institution ——The Bender Hygienic Laboratory of the Albany Medical College was formally dedicated October 27 ——The new Provident Hospital Training School in Chicago was formally presented to the colored race October 29 ——Plans have been prepared for the new University Hospital at Iowa City, Iowa The structure will cost $50,000 and will consist for the present of a west wing and amphitheater ——The new buildings of the Bethesda Hospital, St Paul, were dedicated November 12 ——At the session of the United Presbyterian Women's Association, held in Pittsburg, October 30, property in Allegheny valued at $35,000 was presented by Dr J B Herron to be devoted to the association and its successors to the use and benefit of the Memorial Hospital, with the proviso that a Campbell B Herron memorial bed be established ——The corner stone of the St John s Hospital at Long Island City was laid November 11 with appropriate exercises ——The annual meeting of the board of directors of the Free Hospital for Women in Brookline, Mass, was held October 29 The report showed 261 patients treated in the hospital during the year ——The management of the National Temperance Hospital, an affiliated interest of the W C T U, has purchased ground for a temperance hospital in Chicago

Cincinnati

The mortality report for the week shows Diphtheria 4, typhoid fever 4, other zymotic diseases 7, cancer 3, phthisis pulmonalis 8, local diseases 57, developmental 17, violence 2, under 5 years 31, all causes 102, annual rate per 1,000, 15 15, deaths during preceding week 90, corresponding week in 1895, 102, 1894, 123, 1893, 110

Dr Charles A Hough of Lebanon, Ohio, recently passed through an attack of diphtheria He was in a private ward at the Cincinnati Hospital

The latest news item from the Cincinnati Hospital is that they have been receiving less milk than has been paid for, and something over $1,000 is claimed in rebate It is alleged that the cans do not hold as much as they were supposed to

The Hospital Corps of the First Regiment have recently been denied admission to the receiving ward of the hospital This organization has been doing much good work in the past and without one cent of expense to the city, and this new move on the part of the new management will in times of serious disasters deprive the institution of the valuable aid of this well trained corps, and the reason for the move has not as yet been evident

An unusual case of mental disease was admitted to the city hospital last week A middle aged man was found wandering about the streets and when questioned could give no account of himself Upon examination, when recovered, he talked rationally until asked what his name was and where he lived, both of which he is unable to say His general health is good and this is the second attack he has had within a period of several years

A severe epidemic of diphtheria is present at Parkersburg, W Va, and several cases of the malignant type have appeared

THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Nov 7 to Nov 13 1896

First Lieut John H Stone Asst Surgeon, is relieved from duty at Ft Leavenworth, Kan, and ordered to Ft Riley Kan, for duty at that station

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending Nov 14, 1896

Asst Surgeon H La Motte, detached from the naval hospital Norfolk, Va and ordered to treatment at naval hospital, Philadelphia, November 11

Surgeon E H Marsteller detached from the "St Mary's," ordered home and placed on waiting orders November 18

Surgeon B Whiting, ordered to the ' St Mary s"

Change of Address

Akins W T, from 180 Wilmot St to 1122 Southport Av Chicago

Grote, H W, from *Oakland Music Hall* to 5127 Lexington Av Chicago

Scates, D W from Greenfield Tenn, to 223 Lexington Av, New York

LETTERS RECEIVED

Aikman J C New York N Y

Bailey Wm Curtis, Las Vegas Hot Springs, N M Boehringer C F & Soehne (2), New York N Y Betton, G W, & Son (Drs), Tallahassee, Fla Battle Creek Sanitarium, Battle Creek, Mich Boot, G W, Spencer, Iowa

Cantwell, A W, Davenport, Iowa Cowan, Chas S, Fort Jones Cal Cullen G W & Son, Cullen P O Va Cordier, A H Kansas City Mo Cale G W Jr, St Louis, Mo Chapman, C J, Chicago, Ill, Carter J A, Carthage, Mo

Dewees, Wm B Salina Kan, De Schweinitz, G E, Philadelphia, Pa, Daly, B Lake View Ore Daland Judson Philadelphia, Pa

Ewing W G, Nashville Tenn, Elliott, A R, New York, N Y, Eastman, C A Exeter N H

Fassett Chas Wood St Louis Mo Fuller s, Chas H, Advertising Agency Chicago Ill French, J M, Milford Mass

Garcelon A Lewiston, Me Grace, M B, Iredell Tex

Howard, Wm R Ft Worth Tex Hare H A Philadelphia, Pa Haldenstein, I, (2) New York N Y Herrick J B, Chicago, Ill

Kny Richard & Co New York N Y Korn, A Chicago Ill, Kennedy T C, Shelbyville Ind Kreider Geo N, Springfield, Ill

Long Island Bottling Co Brooklyn N Y

Mayfield W H St Louis, Mo Meany, Wm B, St Louis, Mo McFarland George C Jacksonville Ill

Open Court Publishing Co Chicago, Ill

Probst C O, Columbus Ohio Parke Davis & Co (2) Detroit, Mich

Smart Charles Washington D C Souchon, Edmond, New Orleans La Shuey, J J Red Oak Iowa Short J L La Grange, Ind

Tinker N Athens Ohio Taylor, Lewis H Wilkes Barre Pa Tiffin Newspaper Agency Tiffin Ohio

Van Nort, John P Bayshore, L I N Y Von Ruck, Karl Asheville, N C

Woitishek F J Cedar Rapids, Iowa Watsen Walter Jacksonville, Ill Winn & Hammond Detroit, Mich Wyckoff, R M Brooklyn, N Y Wood, William & Co New York, N Y Whitfield, S T Uniontown, Ala

The Journal of the American Medical Association

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ADDRESSES

NOTES ON SOME OF THE NEWER REMEDIES USED IN DISEASES OF THE SKIN

Address of the Chairman delivered in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga
May 5-8 1896

BY L DUNCAN BULKLEY, A M , M D
NEW YORK

This is certainly the age of progress, and the cry is continually for something new The wonderful advances which have been made in medicine and surgery during the past fifty years would seem to warrant us in looking for newer remedies and measures in all departments of medicine, and indeed, the number of these which have of late years been pressed upon us by writers in medical journals and manufacturers, is so great that much confusion of thought and purpose is often induced thereby

It is well, therefore, now and again, to stop and weigh and try to estimate the value or worthlessness of the new, and to see what of it should be added to our stock of old, and thus to recognize where true advance has been made

It would be really amusing, were it not so sad, to read and record carefully all that is written in journals and publications relating to therapeutics, materia medica and new remedies, and then each year carefully note the true value of this and that remedy, as developed by the experience of others than the one presenting it, and it would be still more interesting and instructive to sum this up at the end of five, ten, twenty and more years

Time and space fail me entirely to even mention the so-called and supposed "advances" and new remedies which have been vaunted during the more than twenty-five years that I have been occupied with diseases of the skin, indeed, such vast numbers of them have passed out of sight that it would require much laborious research to resurrect their ghosts However, this would only serve to show the easy credulity of physicians and patients, and furnish a monument of disappointed hopes In addition to the large number of remedies advocated by members of the regular profession, from time to time, reference should also be made to the innumerable remedies or combinations which have been patented and advertised, many of which have not been without some merit in individual cases, and some of which have been only too often employed or indorsed by physicians of good standing

Therefore, before remarking upon some of the newer remedies, allow me to enter my strong protest against the restless seeking after the new to the exclusion of older and well tried and approved methods in the treatment of diseases of the skin, which seems to be so common of late years It is not so much new remedies we need, as it is a better understanding and adaptation of those we already have There is no king's road to learning, nor is there any short cut to the successful treatment of disease One is, however, often led toward the contrary view by the voluminous announcements and advertisements of new remedies in modern times, whether they are written by members of the regular profession, or issued by manufacturers of drugs, or charlatans

Dermatology is a large field, and much study and experience are necessary to attain success in practice, and yet how very little is this recognized How often have I been asked by medical friends, "Well, what is there new that is good for diseases of the skin?" In few branches of medicine is accuracy of diagnosis more important for therapeutic success than in this and there never can be any remedy, new or old, which is "good for diseases of the skin, every remedy must have its exact adaptations pointed out, not only in regard to the special disease in which it is of value, but also as to the phase or stage of such disease—and that is what often is not clearly stated in connection with new remedies

In concluding these introductory remarks, I wish again to emphasize the fact that our older remedies and methods of treatment yield fairly satisfactory results when applied with skill and thought, without which no remedy can be of avail I wish also to say that, in my opinion, new remedies, as they appear from time to time, are very much less employed by specialists in this line than by the general profession For myself I may say, that it happens not very infrequently, that I have never given certain new remedies a single trial, because before it seemed best to do so, further experience by others has demonstrated their relative worthlessness I am sorry to seem thus pessimistic in my views on this subject, but being somewhat conservative by nature, each year has added to my distrust of new remedies and measures, which are often put forth by those of very slender experience

I shall, therefore, remark only upon some of the *newer* remedies, not the newest, of which I can speak from personal experience, or from their use in the New York Skin and Cancer Hospital

Since the time of the elder Hebra, and largely by his influence, attention has been chiefly directed toward the local study of diseases of the skin, and their treatment by external methods and I have to record that relatively few striking advances have been made in their internal treatment, it is, indeed, remarkable how very few new internal remedies have been proposed in this class of affections of late years, and recent additions can be quite briefly dismissed

I will not attempt to analyze the facts in regard to the injections of tuberculin in lupus, or the antitoxins in sarcoma and epitheliom [illegible] the [illegible]cts are still so much discussed that [illegible] t c[illegible] be passed upon them. Recently Hebra has reported on the subcutaneous injection of thiosiamin in lupus, glandular swellings and exudative products, and other remedies are being tried hypodermically, but the results are still too uncertain to be recorded. The thyroid extract is also being tried and reported on in psoriasis and some other skin affections. Although I can not say much in its favor from personal experience, I am inclined to think favorably of it in psoriasis.

Antipyrin, while not a very new remedy for general use, has recently been advocated in urticaria and will often prove very effective, provided there is not some alimentary disorder continuing the trouble. When cases have resisted ordinary remedies, a moderate dose of antipyrin given three or four times daily, between meals, will often serve to stop the tendency to the eruption. Phenacetin and even antifebrin, will sometimes prove of great service as antipruritics, especially when given at night.

Many new preparations of mercury have been introduced for the treatment of syphilis in the last few years, no less than twenty-four new combinations appearing in a recent publication, but, as far as can be seen the advantage from them relates only to their tolerance by the digestive system, and there is no one to which I can refer with special recommendation. In all it is only the mercury which is the active agent and I have yet to find any yield better results in early syphilis than the one grain tablets of mercury and chalk given every two hours, as recommended by Jonathan Hutchinson. In the later stages of syphilis, the combinations with iodin still hold their old and valued position. The many suggestions in regard to the hypodermic use of mercury, in various forms, occasionally prove valuable in rare cases where there is great stomach intolerance of the drug, or where for some special reason very prompt action is desired, or where the patient, for social or other reasons, prefers an occasional injection to the taking of repeated doses internally. But I have never found it necessary or desirable to resort to them largely, and I question if many of those engaged in treating syphilis now use this method much more frequently than I do.

Some new preparations of iodin have been introduced, notably the iodid of rubidium, which is said to be very well tolerated by the stomach, but from a moderate experience with it, I can not see the great advantage of this expensive drug. Nor can I say much more for the iodid of strontium or several other iodic preparations, but the syrup of hydriodic acid is certainly a most valuable remedy in certain late cases of syphilis.

Turning now to the local treatment of diseases of the skin, we find that a host of new remedies have been presented of late years, among these many have not fulfilled the expectations which were raised, while many are of very considerable value, and their worth has been confirmed by many observers.

Resorcin stands prominent among these, and of its value, when properly used, there can be no doubt. To Unna is due the credit of pressing the importance of this remedy upon the profession, mainly in connection with eczema seborrhoicum, with which his name has become inseparably connected. In this eruption, which in reality is no eczema, but a parasitic disease of microbic origin, resorcin is almost a sovereign remedy. In a strength of about 6 per cent in zinc ointment, or in solution with a little alcohol and glycerin, it will often clear off a well-defined eruption in a very few days. The solution is particularly applicable in the scalp, and the surface should be thoroughly wet with it morning and night by means of a large medicine dropper, it will thus commonly arrest at once the itching attending the scaling of the scalp, which is often one of the earliest signs of seborrheic eczema, and which often leads to a loss of the hair.

Resorcin used much stronger, even up to 25 per cent in zinc ointment, will sometimes give brilliant results, locally, in the treatment of acne rosacea. The application is kept on for several days, and causes some little inflammation, after which the previous redness and pustular condition will be found to have largely disappeared. A second or third application may be necessary, and if the cause of the reflex congestion has been removed by appropriate diet and medication, there will be very much permanent benefit. Resorcin also proves serviceable in certain ulcerative conditions, notably those of a tuberculous type, used in a mild ointment, not exceeding 10 per cent.

Ichthyol certainly stands next in importance among the newer additions to therapeutics in dermatology, as it is also valuable in other branches of medicine, and all are undoubtedly familiar with its use. As an antipruritic it is often of great service. Added to ointments, in a strength of from 6 to 10 per cent, it is very valuable in eczema, and may be used in even quite acute conditions. In dermatitis herpetiformis a watery solution, 5, 10 or even 20 per cent will often give more relief than any other local remedy. When the skin is too dry it can be used in almost the same strength in oil with much advantage, the same measures are of much service in pruritis ani. In burns an ichthyol ointment, about 6 per cent, will often prove the most comfortable dressing, and on old ulcers of the leg the same, though stronger, is very valuable.

Ichthyol has a power of reducing infiltrations, and in chronic conditions may be painted pure over the surface with much advantage. I have a number of times seen the greatest benefit result from painting pure ichthyol over joints enlarged by rheumatism and gout, and then applying one or two thicknesses of flannel, wrapped firmly on the part, forming an adherent dressing with the ichthyol. This may be removed and fresh ichthyol painted on daily, and wrapped with the same flannel, patients who have long suffered from these conditions have obtained more relief from this method of treatment than from any previously adopted.

In this connection I may mention another nondermatologic use of ichthyol, although it has some connection with the troublesome skin conditions observed about the anus. This is the internal use of ichthyol, in piles which I do not think is generally known. Taken in doses from five to fifteen drops in water or capsule, after each meal, it seldom fails in giving relief to the congested capillaries of the lower rectum and anus, if the condition is not too exaggerated; when by long duration the blood vessels have become permanently dilated with intercellular exudation and some vascular new formation, and especially if a clot has formed in the mass this remedy has little effect. But in the milder and recurrent cases, where small tumors form, ichthyol, if freely used internally, and perhaps externally, will give a relief which is most gratifying, and I have many patients who at once resort to it on every return of this trouble.

The disagreeable odor and the staining of ichthyol have led to the introduction of several other substances intended to take its place. One of these is *thiol*, a sort of artificial ichthyol, less unpleasant in smell and producing less permanent stains on linen. From what I have seen of its use in the hospital, I do not think it fulfils the requirements as well as the natural drug. I may add that it is sometimes difficult to obtain the true and pure ichthyol, as there have been several synthetic products offered in its place, none of which seem as good as the imported natural product.

Another of these ichthyol-like remedies is *tumenol*, upon which a number of observers have reported. It acts much like tar in relieving itching, but it is expensive, and rather hard to manage, and from some experience with it I do not see its advantage over ichthyol.

Several astringent remedies have been introduced of late, some of which are of considerable value. Prominent among these is alumnol, an aluminum salt containing sulphur. It is in a fine white powder, very soluble in water, in glycerin, and in warm alcohol, and insoluble in ether. A 1 to 5 per cent solution in water may be applied with advantage even in acute eczema. It is also of advantage in ointments, 10 to 20 per cent., and also in dusting powders, even up to 30 per cent.

Dermatol, a basic gallate of bismuth, in form of a yellow, insoluble powder, is also a safe astringent, used in ointment 5 to 10 per cent., or as a dusting powder.

Gallanol acts much in the same manner, and is valuable in the more chronic stages of eczema and in psoriasis. Being white and not staining or irritating the skin, it has advantages over chrysophanic and pyrogallic acid.

Gallaceto-phenone, a compound from pyrogallic acid, acts much in the same manner as that drug, and is certianly of considerable value in psoriasis, in an ointment of about 10 per cent.

Beta naphthol is an old remedy, but still one of the later additions to our dermatologic armamentarium; it has considerable power over psoriasis, in ointments, in a strength from 6 to 10 per cent., and is also useful in scabies, and of moderate value in the vegetable parasitic eruptions.

Of the newer preparations of *iodin*, *europhen* takes a prominent place. It is non-toxic, but slightly odorous, and with many has supplanted iodoform, in the treatment of venereal ulcers; it serves well also to promote cicatrization when dusted on all forms of ulceration.

Aristol still holds its place for much the same conditions and is also valuable in an ointment, 4 to 10 per cent., in psoriasis.

Iodol is one of the newest claimants of attention, and acts very well in place of iodoform, it being said to contain 89 per cent. of iodin; it is practically iodoform and therefore a desirable preparation.

Boric acid has also come prominently into view as an antiseptic and astringent, used both as a powder and in solution in water and in ointments, in a strength of from 5 to 20 per cent. It is always a safe and often a very serviceable remedy. As an antiseptic the *peroxid of hydrogen* has steadily gained in reputation, and often serves most admirably in checking suppuration, either on external surfaces or injected into cavities or sinuses.

Several remedies of value have been brought forward of late for the relief of itching. Prominent among them is *menthol*, used in ointment or oily solutions, in a strength of from 2 to 10 per cent. Generally it is best to combine with it about double the proportion of carbolic acid, partly to aid its action and partly to overcome some of the chilly sensation produced by the menthol when used alone.

Cocain also sometimes serves an excellent purpose, added to ointments, in a strength of 1 to 5 per cent. Care must be exercised in applying it over too large a surface, for fear of systemic results, and I have sometimes thought that it acted as a local irritant.

The combination of *camphor* and *chloral*, rubbed together in equal parts till a liquid results, and added to ointments, in a strength of from 5 to 15 per cent., is also a valuable antipruritic. Its application is attended with considerable burning sensation, if there is any raw surface, but when used in proper strength this need by no means interfere with its appplication. Recently a similar compound with the addition of eucalyptus has been introduced under the name of campho-lyptus.

Campho-phenique, a patented combination of camphor and carbolic acid, is also of real value in many conditions, where an antiseptic and antipruritic action are desired. It may be used in an ointment or in oil, of a strength from 6 to 20 per cent.

A combination of equal parts of *carbolic acid*, *tincture of iodin* and *chloral* has been introduced by Dr. Cutler of New York, which answers well as a parasiticide in favus and tinea, and is also valuable as an antipruritic; it often requires to be diluted.

Various dusting powders have been brought forward. Notably the *stearate of zinc* with other remedies combined with it; these answer fairly under favorable circumstances. *Emol*, a natural silicate, has been introduced by Jamieson of Edinburgh, and often acts excellently as a powder or in paste with water, in chronic eczematous conditions.

Considerable attention has been paid to the bases in which applications are to be made to the skin, and it would occupy far too much time if I attempted to give even a brief description of the advances which have been made in this direction. Some years ago ointments were largely used, with lard as a base, to which later were added the cerates. These are all apt to become rancid, and a variety of substances have been brought forward to obviate this difficulty. The preparations from petroleum, *vaselin*, *cosmolin*, *albolene*, etc., are all valuable, but are not firm enough to make a sufficiently protective dressing, in many instances. Later we have had preparations from sheep's wool, *lanolin*, *agnin*, etc., which are more firm and sticky, and form a good addition to the petroleum products, or to other bases.

Still later the attempt has been made to provide dressings which shall be applied in such a manner that they shall adhere to the skin, and, while holding a medicament in solution or suspension, shall thoroughly cover and protect the diseased surface.

Beginning with the idea embodied in collodion, or the liquid guttapercha of the old pharmacopeia, various combinations of gelatin, with dextrin, starch, glycerin, etc., have been presented, most of which serve the purpose fairly well, but can not be detailed here. One of the most recent of these is Bassorin paste, composed of gum tragacanth 48, dextrin 25, glycerin 10, water q. s. ad [illegible] Th[illegible] be combined with various [illegible] like covering, which protects the parts well, while healing progresses beneath

Finally, Unna has introduced quite a line of pflastermulls and salbe-mulls, in which various medicaments are incorporated These certainly are of very considerable value in certain cases, and afford a means of keeping the remedy required in close juxtaposition with the diseased surface

I have said nothing in regard to the various medicated soaps, and have little to say commendatory, for as a rule, little washing is desirable in diseases of the skin, and they have always seemed to me to be an irrational method of making other applications to the skin

There are many more of the newer remedies and measures which I might, with advantage, bring before you But this paper has already overstepped the limits within which I had proposed to speak, and I must leave them for consideration on another occasion

I have said enough, however, to show that there have been real advances of late years in the therapeutics of diseases of the skin, although I still feel that I must repeat what I said at the opening, that caution should be exercised against accepting much of the new which is brought to our attention The science of medicine is a grand and difficult one, and we must not be content with ordering this or that remedy, on however high authority, without understanding the diseased condition we have to meet, and the true nature and uses of the remedy we are to prescribe All thoughtful men must regret the ready and often careless way in which some of the newer remedies have been pushed, too often for the gain of manufacturers or proprietors, and the profession should make a stand against and repudiate the impudent manner in which many of them have been vaunted, for commercial purposes

4 East Thirty seventh Street

EULOGY ON JENNER

Delivered before the Jenner Centennial Memorial held under the auspices of the Golden Belt Medical Society of Kansas at Salina Kan Oct 1 1896

BY WILLIAM B DEWEES, A M, M D, LL D

SALINA KAN

Mr President, Ladies and Gentlemen We have gathered to-night to commemorate the life, worth and work of a really good man—a great country doctor It is meet that the doctors of a community, and especially the members of a medical society of country doctors, pause a brief while and assemble with the people whom they serve in a public gathering like this, to pay their tribute to him who laid the foundation of preventive medicine

By invitation of your committee, Mr President, on the celebration of the centennial memorial of the Jennerian discovery of the protective value of vaccination, I appear before you Your learned and greatly beloved secretary, Dr LaFevre, has most ably and interestingly made known to you much of "The Life and Works of Jenner" In my paper I am limited to an "Eulogy on Jenner" Standing as I do on this occasion to speak for the memory of the illustrious dead, I shall earnestly endeavor to judge as I would be judged, and

"If, unhappily, I dream,
And prove too weak for so divine a theme,
Let charity forgive me a mistake
Which zeal not vanity has chanced to make,
And spare the speaker for the subject's sake"

Dr Edward Jenner was preeminently one of the noblest benefactors of the human race His precepts and examples are ever a trustworthy guide to the true physician He earned and held a proud position in the medical world and in the public thought He stood for independence, for intelligence, for self-discipline, for courage, for reason, for temperate thought, speech and deed, and above all for absolute integrity He disdained and spurned the temptations of wealth and fame His sympathy was wide as want, and like the sky, bent above a suffering world He found happiness in diligently laboring for the prevention and relief of human suffering, and the elevation of the race, being content with a competence sufficient to supply all real wants His full measure of joy was realized only in the felicities of his domestic life

This distinguished Briton was a great man, a good man, a renowned physician, whose name and work were honored by millions of his fellow-men thoughout the civilized world, even so a hundred years after his great and immortal discovery The thoughts and deeds of such a man are truly worthy of commemoration

The literature of many lands is rich with the tributes that admiration, gratitude and love have paid to the noble deeds of the great and honored dead These tributes disclose the character of nations, the ideals of the human race In them we find the estimate of greatness, the lives, the thoughts, the deeds that challenged praise and thrilled the hearts of humanity

They teach us that men are only fragments that the greatest walk in shadows, that faults and failures mingle with the lives of all, that silence is the most complete refutation for every misinterpretation of motive, for every unjust charge of wrong, that charity holds the scales in which are weighed the deeds of mankind, that peculiar traits, born of locality and surroundings, prejudices and passions, born of conflict and envy, superstition and egotism, born of ignorance and vanity, these are but the dust of the race—these are accidents, customs, clothes, habits, fashions that have nothing to do with the individual, except to guide character

These tributes show us how poor this world would be without its graves, without the recorded memories of its mighty dead, without their indisputable proof that only the voiceless speak forever, and that a noble life enriches all the world

Again, we learn from these tributes, that each discovery that marked a new epoch in the history, and started a new era in the advance of medicine, was rightfully subjected to the crucial test of that wonderful and only scientific crucible—practical experience—and thus received in due time its merited accordance of the profession That, moreover, the authors of such discoveries have been in the meantime made to suffer most unjustly the pangs of envy and prejudice, of designing and deluding intelligence, of fanaticism and ignorance, but all to no purpose in dissuading them from their conviction

Not all men have the courage of their convictions So it is with doctors But, nevertheless, the imperative duty of every doctor remains to support and stand up bravely for what he believes will benefit mankind

Did Ambrose Paré cease to tie arteries after amputation, because all the doctors of Paris denounced him?

Did William Harvey recant from his immortal discovery of the circulation of blood, because he was renounced by his colleagues and because his discovery proved a boomerang which cost him his practice for many years?

Did Ephraim McDowell cease to follow his convictions, because a raging and howling mob threatened to lynch him and because the entire medical world stood still to denounce him, while he dared to step forward in the advance of science to save the life of a patient, thus unconsciously inaugurating abdominal surgery?

Did Chamberlain refrain from advocating the use of the obstetric forceps, because he was ridiculed and censured as a fanatic and egoist?

Did Long of Georgia, who was the first man to produce general anesthesia and do a painless surgical operation, cease to prevent all surgical pain, because his colleagues and friends showed their contempt for so rash a deed?

Did the Atlees of Philadelphia cease to operate for ovarian tumors, because Dr. Charles D. Meiges denounced them as murderers and asked the aid of the law to stop their operations?

Did Jenner—the subject of our sketch—cease to struggle in following the light of his brain and the impulse of his heart, because he was made the victim of medical hate and scorn for years, before he was honored and rewarded for his immortal discovery, which marked a new epoch and started the era of immunization which remained to be augmented by the labors of Pasteur?

I answer, No! No! These are the examples of the character of men who had the courage of their convictions, the integrity that is guided by reason, and the sincerity that has the light of truth, men whom we ever delight to honor, because to the influence of such men alone is due the real progress in medicine.

Edward Jenner was a progressive and a loyal physician. Progress in medicine is simply improvement of the art in its application and depends upon the loyalty of the profession. With true physicians loyalty does not stand on the side of concealment, but on the side of exposure. The only dictum of medical progress is reason. Well may we say then, in the language of the Prophet Isaiah, "Come now, and let us reason together and take counsel, since

"A little counsel now and then
Is relished by the wisest men."

A close observer of history will note that the progress of rational medicine in each succeeding age had to contend with the influences of preceding ages. Each succeeding generation is based on the preceding one. We are the children of our parents, we reap what they sowed. In the same way the future depends to a great extent upon the present. If this be true in political, religious and social life, in matters of science and trade, it is, perhaps, most of all the truth in medicine. If we wish to throw a glance on the future of medicine we must construct it on the basis of the influences prevailing in the present age. We can predict future progress only upon the basis of judging the past and present. However, in doing so we must always make allowance for the fact that in the natural course of events forces of peculiar strength may and do come forward which we can not foresee. Such forces are, for example, the appearance on the scene, of men of extraordinary power. If politically, men like Napoleon, Bismarck and Washington gave a new turn to the history of France, Germany and America, if men like Luther in Germany and Wesley in England gave a new stamp to the religions life of their age, we point with much pride to such country doctors as McDowell, Long, Sims, Battey and the immortal Jenner, who have marked some of the most profound epochs in the medical history of the world.

Jenner stood in the front ranks braving truth, progress, harmony and peace. He was a pioneer, a torchbearer of truth and reason, a ceaseless toiler in the great field we call the world, an honest worker for the progressive welfare of his fellow-men. He was endowed with a great mind, blessed with a heart filled with benevolence and possessed with self discipline to philosophic study. No wonder that the remark of the milkmaid proved such a prolific seed in so fertile a soil, as only the brain of a Jenner afforded. He abhorred all connection with a progress which can not discriminate between essence and accident, between truth and her clothes.

He knew that the practice of medicine is not and can never progress to become an *exact science*, because the individual equation always contains an unknown quantity—*vital resistance*.

He worked on common ground, he had common-sense, because he knew the law of average.

He taught the principles of loyalty as a virtue which should never go out of fashion.

He ever oiled the troubled waters, knowing that medicine serves best when it builds, and not when it fights. With him the law of progress in medicine was not an inexorable edict, but a command of reason. He knew that our instincts are the legacy of ages, that the office of reason (the oldest and yet most acquired faculty of man) is not to inaugurate a sort of nihilism of the senses to strangle and crush out the instincts, as some suppose, but to train, cultivate and develop them along the lines made necessary by the ever-changing conditions of civilization.

Edward Jenner was a man of absolule integrity, of superb courage and of true sincerity. Integrity is the oak around which all other virtues cling, courage is the support and guard of the other virtues, sincerity is the perfect mirror of the mind, it reflects the honest thought.

Jenner knew that sincerity is the foundation of character and that without it there is no moral sublimity. He knew that without character, without honesty, without bravery, there is no worth, and that below indolency, below poverty, there is the rayless abyss of reputation. His soul thirsting for truth, he was ever repulsive to a practice sunk into dead formalities. He honestly braved the work before him and showed to the world what living medicine means. He not only acted without fear, but he had the fortitude of soul that bears consequences of the course pursued without complaint. He demonstrated the truth, that the heart must be in any life-work that is to be of permanent benefit to humanity, and that above all wealth, above all station, above the robed and the crowned, rises the sincere man. He knew that the confidence of mankind is not set down in writing, signed, sealed and delivered to order, but resides in honor. He followed the light of his brain and the impulse of his heart.

He was attacked and made a "mark for every passing blast of scorn to whistle through" by "a class of critical dicta everywhere current," but he never wavered and he never swerved. He said nothing harsh, he did nothing rash. He answered the insulters with a smile, and labored on quietly, faithfully and patiently as eternity, knowing what the end would be. He knew that truth can wait, that the day would come, and he lived to be rewarded and honored by seeing the best and greatest minds of the world acknowledge the rays of light shed by his torch

We can proclaim truly that, were it not for such brave, sincere and honest souls like Jenner, "the dust of antique time would be unswept, and mountainous errors be too highly heaped for truth to overpower"

Edward Jenner was the ideal country doctor Born in a quiet country town, a representative of an honorable family, an orphan at the age of six years (his father dying), reared amid the influences of his native groves, meadows and the health-giving country air, and the cruel superstitions and traditional customs of his age and time, Jenner developed a passionate love for nature and a marked manhood and courage to investigate He found the height of his ambition and the zenith of his power to benefit mankind while walking with nature—a country doctor during his entire professional life He had the physicianhood and fortitude to search nature by following her, and to honestly reveal the light he saw He belonged to the distinguished class of country doctors to the credit of whom truth records most of the greatest discoveries freighted with the greatest good to humanity—who did accept early Dame Nature's invitation to Agassiz

> "Come, wander with me, she said,
> Into regions untrod,
> And read what is still unread
> In the manuscript of God"

Jenner thus learned to know early that "childhood is the era of scientific acquisition," and ever after labored as a child of nature

> "To search through all I felt or saw,
> The springs of life, the depths of awe,
> And read the law within the law"

He assumed the whole responsibility as is common to country doctors, with whom responsibility is an educator He wholly disapproved any attempt to stifle doubt as distinct from the effort to confront it fairly with the deeper facts of life He taught us well the lesson of magnanimity and toleration He was the ideal country doctor, a boon to medicine and humanity, cultivated by true and natural methods, enlisted in the service of love, daily exercised in deeds of benevolence and unselfishness, and representing a class who are walking together in the pathway of progress in honorable and rational medicine, who can justly proclaim

> "We are the ancients of the earth,
> And in the morning of our times"

Unless all signs fail, the medical world will ever delight to honor the memory of Edward Jenner, for his love of nature and all that is truthful and good, for his benevolence and unselfish desire to prevent and relieve human suffering, and for his patient and persevering pursuit of whatever promised to result in material benefit to mankind

When the great work of a good man has bestowed its boundless blessings upon nations for an hundred years, when it has stood the scientific test of practical experience for a century in spite of jeer and taunt, when the entire civilized world has bowed in acknowledgment its centennial homage, in honoring the memory of such a man, in speaking words of praise and gratitude to the commemoration of his name, we pay a lasting tribute to ourselves

ORIGINAL ARTICLES

THE FIELD OF MONOCULAR FIXATION AND ITS RELATION TO HETEROPHORIA

Read before the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY CASEY A WOOD, M D

CHICAGO

So little is said in English text-books on ophthalmology about the field of fixation—monocular or binocular—and so much space is given to it in that portion of foreign works devoted to physiologic optics that it seemed worth while to bring up the subject for discussion here We are so concerned in investigating the relations of the extrinsic ocular muscles, as they are engaged in fixing some point (doubtless the most important point) immediately in front of the eyes, i e, at the center of the field of fixation, that we are apt to lose sight of the fact that the fixing of eccentric objects and points at the extreme periphery of the field is also of great importance It should be remembered that while binocular vision may be obtained and maintained with ease, so long as the object fixed is directly in front, this result is often difficult or impossible when looking obliquely to the extreme left, right, up or down Not only is this true in marked paretic conditions of one or other of the straight or oblique muscles, but it is also true in the so called insufficiencies In other words the usual tests for heterophoria or heterotropia—the various kinds of photometric measurements especially—give us but one phase of the conditions under which the extrinsic muscles do, or fail to do, their daily work

I wish to confine my observations to one of the means by which we may measure the excursions, in all directions, of each eye separately, as indicative of the part which eccentric excursions play in the production of muscular asthenopia

It is to Landolt that we are chiefly indebted for utilizing the field of fixation in practical ophthalmology The monograph written by Eperon in the *Traité complet*, taken in connection with Aubert's chapters in the Graefe-Saemisch Handbuch, tell us in a few pages about all we know of this subject

My only apology for referring to these fundamental laws of optic physiology is that I have made a few observations which may be of use to those who are now pursuing this interesting study

The field of fixation of an eye includes all those points which the eye can successively fix, the head being completely at rest The limits of the field represent the extreme excursions of the eyes in all directions At least three methods (two objective and one subjective) have been and may be employed in making these measurements One of the objective tests consists of observing, on the center of the cornea, the image of a small flame carried along the arc of the perimeter, just as one does in determining the degree of squint Another plan of objective observation is seen in the ingenious and excellent tropometer devised by Stevens and described by him in the *Annales d'oculistique* for July, 1895 By means of this all the movements of rotation can be exactly measured

In the subjective method we utilize the visual acuity and the perimeter The object is usually a letter or series of letters, which can be readily changed, attached to a carrier that is run along the arc of the perimeter as in measuring the field of vision

Owing to the different methods employed by various observers of the limits of the normal field, authors differ somewhat in their measurements The following, by Landolt, are as nearly correct as we can obtain them

Directly out	45°	90°	Out and down	47°	92°
Directly in	45°		In and up	45°	
Directly down	50°	93°	Down and in	38°	85°
Directly up	43°		Up and out	47°	

These figures vary slightly in individuals, but the directly inferior angle is always the largest, while the infero-internal is always the smallest The eyelids, margins of the orbit and bridge of the nose must always affect the result of these measurements just as they do in determining the extent of the visual field

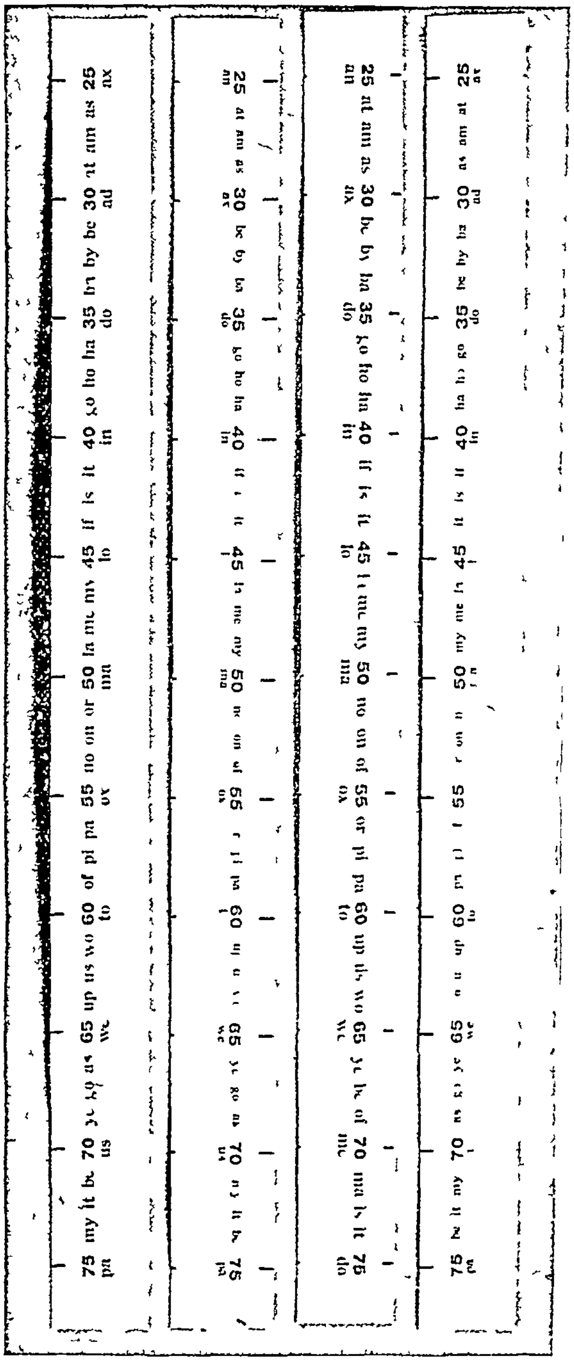
Stevens, after speaking of the importance of determining the absolute as well as the comparative rotation of the eyes, not only from side to side but up and down, says "We have had, until quite recently, no sufficient means for determining these rotations The judgment which we may form by watching the rotations is not to be relied upon The perimeter is destitute of any considerable value for this purpose By it we can not measure the downward rotation in many casses, for the pupil buries itself behind the lower lid, nor can it measure the rotation inward, for the nose interferes, and even the outward, the only one which can be generally measured, is not well measured"

While I recognize, in general, the advantage of objective over subjective tests, it appears to me that Dr Stevens' objections to the subjective method of determining the limits of the ocular excursions are weakened by the fact that what we wish chiefly to know is not the extreme limit of rotation of the eye in various directions so much as its limit of observation What we desire to ascertain in practice is whether the various muscles, alone and in combination, are capable of making all the excursions required for the purpose of securing and maintaining single and binocular vision Whether an eye would be able to fix an object further to the right or left if the nose were removed, or one higher or lower if a projecting lid or orbital margin were cut away is not of essential importance

We are usually advised, also, to make use of the candle image when the eye is amblyopic or can not read large type Now these are just the conditions under which we are not usually concerned about the fixation field It is the eye that sees and not the blind eye that causes trouble in defective excursions If an eye takes no part, or only a feeble part, in the work of fixation, why trouble ourselves at all about its rotation?

These considerations caused me to attempt to remedy what seems to be certain defects in the technique of determining the field of monocular fixation, as it is commonly applied So far as I know, the most effective plan employed—decidedly superior to the old Helmholtz-Berthold method—is that exhibited in the modified Landolt apparatus attached to the McHardy perimeter The head of the patient is placed in the primary position and fixed by biting a rigid crossbar of hard wood

Lang thus describes the method of examination "The balanced test object exhibits a single word of two or three letters printed with the smallest type that can be distinctly seen by the eye under investigation The patient is seated at the perimeter, directly facing the fixation point, with his head erect and his chin supported on that half of the chin-rest which brings the eye that is about to be tested into the middle line, opposite the fixation spot If the patient can not maintain this position during the whole examination, he is asked to grip the bar of the bite-fixation-apparatus between his teeth, which effectually prevents the least movement of the head The other eye is covered with a pad and bandage, or its lids are closed and held down by the lashes with the tip of the patient's forefinger The words in the test object, in the various sized type, are now exhibited, and one, in the finest print that the eye can read, either without or with glasses, is exposed after the test object has been moved to the end of the perimeter arc, which


25 at am as 30 by bv ha 35 yo ho ha 40 if is it 45 is me my 50 no on of 55 or pl pa 60 up th wo 65 ye he of 70 ma hy it 75

is extended horizontally outward. While the patient, without moving the head, turns his eye to the utmost outward toward the extremity of the arc, the observer slowly moves the test object inward toward the fixation point, but stops directly the patient can read the word, and at once records, in degrees, the position which the test object occupies in the arc.

"The arc is now placed horizontally inward, the test object is moved back again to the extremity of the arc, a fresh word is exposed, and the observation is repeated. When the field of fixation has been tested in the horizontal meridian, which is all that is generally necessary, the examination of the remainder of the field can be ascertained by placing the arc in each 30 degrees of the circle, and recording the results on a field of vision chart.

"When the examination of one eye is completed, the head is shifted to the opposite side of the chin rest and the second eye is tested in the same manner."

On making examinations with this apparatus I long ago noticed that the continuous effort to hold the eye at its extremest rotation, in so many directions, was exceedingly fatiguing and often made it difficult to complete the examination. It was also remarked that the results varied in the same individual and I feel certain that these different measurements are due to the fatigue incident to the attempt of the eye to fix an object whose exact position at the extremity of rotation is unknown. The nystagmus-like movements of the globe, after a number of these trials, is quite noticeable.

Instead of using an object attached to the carrier on the perimeter arm I have used an exceedingly simple device whereby the rotation of the globe in any direction is rapidly and easily measured. It may be used by all persons who can read Jaeger xii at fifty centimeters, and may even be employed for others whose visual acuity at that distance is considerably less. Four strips of unglazed parchment paper have printed on them words of two letters placed between, as well as below, figures representing the degrees of latitude on the perimeter arc. These strips are, together, placed in position on the arm of the perimeter, the patient's head being in the primary position (I usually do not consider any elaborate fixation necessary) and he is asked to read to the lower line, as far away from the center as possible. This accomplished he is requested to give the figure placed above the word just recognized and to try and read, farther out, additional letters on the figure line. Each word beyond represents about one degree on the scale and the number of words so read added to the previous figure gives the limit, in degrees, of the field in that direction. As each quadrant of the circle is passed over, a slip of paper is removed, revealing the next paper whose lettering, being different, suggests nothing to the person under examination. I have found that instead of making the vertical letters face up and down one can accomplish the purpose of distinct vision by printing them with type of a bolder face, thus providing for those rare cases in which it is desired to test the muscles of an eye that can not read Jaeger xii, or thereabouts.

My investigations of the field of fixation have developed nothing new except that the normal field, in persons whose view is not cut off by the nose, lids or orbital margins, seems to have wider limits than those set down by Landolt, particularly in the downward direction.

The causes that determine an unusual shape or abnormal position of the whole field, as pictured on the perimetric chart are, commonly, actual paresis of one or more of the external muscles of the eye. Apart from an abnormal configuration of the face, we also recognize those influences that underlie the various forms of heterophoria, i. e., general fatigue, weariness of one or more of the extrinsic muscles, age, defective innervation and, possibly, congenital defects in the muscular fibers. But in cases of heterophoria occurring during the fixation of objects directly in front of the eye, the state of the refraction exerts a very wide influence on the size, shape and situation of the whole field. Its boundaries are enlarged in moderate degrees of hyperopia, but are diminished in the higher grades, owing, as Landolt thinks, to the developed muscles acting on a not too large globe in the former instance and to the lack of development, in the latter case, affecting the muscular elements in common with all other parts of the eye. It is restricted in the elongated and enlarged globe of the extreme myope, owing mainly to the greater size of the eye and the weakness due to the stretching of the muscles.

My former assistant, Dr. T. A. Woodruff, and I have carefully measured a large number of fields, normal and abnormal, in persons of all ages and all states of health and refraction, and I feel justified in thinking that when carefully done, using the device I have just described, the defective excursions and often the defective muscle or muscles can be readily detected by a glance at the perimeter chart. Take for example a case of simple left hyperphoria of 4 pr. diopters. Here one obtains a perimetric picture whose irregular outline covers, perhaps, as much ground as the normal field but whose directly upward and downward limits in the left eye are higher than normal. Thus we have not only an indication of the amount and kind of the heterophoria but we are enabled, by a comparison with the normal field, to arrive at a conclusion not only as to the actual direction of the muscular defect but, also, in some cases, to venture an opinion as to particular muscle or muscles involved.

DISCUSSION

Dr. G. C. SAVAGE, Nashville—In studying binocular fixation we must have a few things constantly in our minds. One is, that the yellow spot of Soemmering is the point from which the visual axis starts. From this point it must pass through the center of the retinal curvature, in monocular vision, cutting the cornea wherever it may, sometimes in the center, above, below, to the outer side or within. If the visual axis, for the left eye, should pierce the cornea beneath the center, while the visual axis, for the right eye, pierces it above, in binocular vision there would be a necessity for action of the superior rectus of the right and inferior rectus of the left, in order to make the visual axes meet at the point of fixation. Even if the muscles are well balanced in their inherent power, a test of these eyes would show a left hyperphoria. It is only in a case of this kind that the use of a prism, in position of rest, would be justifiable, as I have shown before now. In the same way I might be able to show an exophoria, also an esophoria, dependent on the fact that the visual lines do not cut the cornea at the proper points. The Javal ophthalmometer, if it did nothing else, would be worth its cost, in that it always shows quickly and accurately, the decentration of the yellow spot of Soemmering, or, what is the same thing, the misplaced cornea.

Dr. D. S. REYNOLDS, Louisville—In my experience all the other methods tried have been more or less unsatisfactory and am quite willing to try Dr Wood's method as soon as I shall have had time to master it

Dr C A Wood—This instrument does not take the place of the various phorometers I thought we ought to know something more than the relative insufficiency of the muscles We want to know what particular muscle is at fault This is something of a step in that direction

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A CONTRIBUTION TO THE QUESTION OF REMOVAL OF THE LENS IN MYOPIA

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY HERBERT HARLAN, A M , M D
BALTIMORE MD

My contribution is in the form of a report of two cases, both the result of accident, and in one case thirty-three years have passed between the accidental operation and the observation, much the longest period of which I am aware

Jno Harvey, aged 32, a Welshman and laborer, by occupation, had always been very shortsighted He carried in his pocket a pair of — 13 D glasses which he occasionally used for reading By their help it was not necessary to hold the print so near his face For distance, he said they were not much good On January 8 he received a blow in the right eye, which, he said, had always been the better Some hours later he came to me at the Presbyterian Eye and Ear Hospital There was a bruise on the right cheek and eye lid and examination showed the lens still perfectly clear, dislocated into the anterior chamber The upper edge was a little above the center of the pupil and with the ophthalmoscope the fundus could be easily seen, either through the lens or above it, and by the indirect method, in one position, two images of the optic nerve could readily be seen, at the same time There was some redness and pain The left eye had high myopia with choroidal atrophies and very little vision Removal of the lens was advised and the following day the operation was performed, a downward corneal section being made There was some loss of vitreous but the healing process was uneventful The iris was not touched at the time of operation, but at the present time is tucked down behind, as it were, though not adherent to the corneal wound The appearance is as if there had been a large downward iridectomy done On February 4, + 3 50 D S + 4 50 cyl 165 gave 15-40 vision and 8 D S same cyl enabled him to read No 1 readily On looking out of the office window where a mild storm was in progress he remarked that it was the first time he had ever seen snow falling when on the inside of the house The glasses indeed would indicate a much less degree of original myopia than — 13 D the old glasses Fukala, Pflueger, Von Hoppel and others have noted the very high refractive power of the human lens in these cases

The second is a case of accidental removal of a lens, in a child, with high myopia, resulting in good vision at the age of 45 Fellow eye at that time lost by choroidal atrophy

Sister M a cloistered nun, aged 45, stated that she had always used her right eye, but of late, she did not see well with this one and that the left, which had been injured, was now the better, but she could not read at all I found the right had only a vision equal to the counting of fingers at eighteen inches With the left V 20-50 and was slightly improved by plus lenses up to 2 D The ophthalmoscope revealed in the right high myopia with extensive choroidal atrophies while in the left there was seen, behind the iris, an irregular opening through what was evidently the remnants of an opaque lens capsule Further questioning brought out the fact that the injury was caused by a blow from the end of a stick and occurred at the age of 13 years

It was then plain that there bad been, at that time, a traumatic cataract, followed by absorption of the lens substance There was no fundus trouble in this eye and 5 D + enabled her to read "brilliant" at twelve inches

So here was a case of accidental removal of a lens at 13 followed by good vision, 20-50 without glasses, at 45, in this eye, while in the fellow, in which no attempt at correction by glasses, has ever been made, the myopia had probably increased, the choroid had atrophied and all useful vision had been lost Would removal of this lens in childhood have saved this eye? The fact of about 2 D of accommodation in an eye without a lens is of some interest It is likely that a carefully adjusted glass would improve the given vision in the left eye, but I was obliged to see the patient at the nunnery and to use a candle for the ophthalmoscopic examination The patient was apparently embarrassed and gave hesitating answers and no attempt was made to correct possible astigmatism

DISCUSSION

C M Hobby, Iowa City—In high myopia the necessary concave glasses diminish the size of retinal images and this is the sole reason why in otherwise normal conditions the operation should be suggested This difficulty is scarcely appreciated by the patient In cases of retinal disease, or choroiditis the removal of the lens in high myopia might, by enlarging the distinct retinal image, be of advantage In cases where, in high myopia, degenerative changes appear the early removal of the lens is indicated I have seen one case in which the lens was removed with resulting vision, without glasses, of 20 40

C W Kollock, Charleston, S C —I have recently seen a German music teacher with a myopia of about 30 D who was going to Europe to have his lenses removed It is doubtful whether the operation would improve his condition as he has posterior staphyloma

A W Stirling, Atlanta—I have seen operations performed, one by Scholler, having the desired effect Two operated upon in London went to suppuration In the third case the retina became detached to the full extent so that the eye was worse than before

C A Wood Chicago—I think I performed the first operation of the kind done in this country The case was as follows March 2, 1891, A M , seamstress, 17 years old, been myopic for eight years, lately getting much worse Could not go to school and now unable to do any sort of work If she attempts to sew her eyes ache and feel as if they were bulging out of her head Glasses make objects brighter but do not otherwise help V R fingers at seven feet, with —14 D 20 100 V L , fingers at eight feet, with — 15 D 20 70 There are sharp temporal crescents of about 1½ d d in both eyes No choroiditis, although the choroidal vessels can be readily seen over the whole background Macular regions show as cherry red spots March 3, needled the right lens—a small central opening Used atropin and hot water to relieve subsequent pain In a week tension with pericorneal injection and pain Made a corneal opening and removed most of the lens Did two subsequent needlings August 5, V R 20 100 The pupil is irregular and attached to pupillary membrane In December needled left lens without mishap The lens absorbed nicely V L 20 100

With L 90° + 50 + 14 = 20 50 and with 90° + 50 + 8 = J 2 Did not order lenses for right eye although with this correction on left side patient was able to read and do other near work and eyes were comfortable I did not see her again until March of this year when the following condition was observed secondary cataract V R fingers at 5′ and improvement V L + 9° + 50 + 3 12 200 and 90° + 50 + 8 J xvi Left membrane needled and with 90° + 75 + 2 50 = 20 50 and 90° + 75 + 6 50 = J2 Two weeks later did a De Wecker's capsule scissors operation, after which patient obtained 20 50 vision and could read J2 and do near work without trouble

THE DEGENERATE JAWS AND TEETH

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of American Medical Association held at Atlanta Ga May 5-8 1896

BY EUGENE S TALBOT, M D , D D S
FELLOW OF CHICAGO ACADEMY OF MEDICINE

Next to the ears, the jaws and teeth (as was to be expected from the variability of these organs in allied animals), are most affected by degeneracy This is particularly true of the vertebrates, especially the mammals, as might have been anticipated from their phylogeny or line of descent At the head of the vertebrates is man, at the foot is the lancelet (*amphioxus*), most akin to those semi-vertebrates the ascidians, who, in their larval phase, are higher than when adult and whose life history excellently illustrates that potent phase of evolution, degeneracy [1]

The lancelet[2] has a spinal cord inclosed in a soft semi-cartilaginous canal (the notochord) It is practically destitute of a brain The cerebral vesicle which represents this, is a plain cavity without true subdivision into ventricles There is no cranium and the median eye is a mere pigment spot with which it is able to distinguish light from darkness Behind this is a small pit lined with cilia for olfactory purposes Into this the cerebral vesicle of the larval lancelet opens The mouth is well guarded against the intrusion of noxious substances, which have to pass through a vestibule richly provided with sensitive epithelial cells resembling the taste buds of the human mouth There is no heart In this the lancelet is lower than the ascidians, the insects, crustacea and many mollusks It approximates the worms, which, despite a very elaborate vascular system, are destitute of a heart, the function of which is performed by contractile blood vessels From an embryologic and morphologic standpoint, the proximate ancestor of the vertebrates seems to have been a free swimming animal intermediate between an ascidian tadpole and the lancelet, while the primordial ancestor was a worm-like animal organized on a level with the starfish The vertebrates, embryologically, develop from this stage to the lampreys thence to the cartilaginous fish (shark), to the amphibia (frog, toad, axolotl), to the reptiles and thence to the oviparous mammals (duckbill and spiny ant-eater), to the lemurs and through forms like the pithecanthropus erectus to man The present study will be confined to the mammals, passing from the simple types of teeth found in that oviparous edentate, the spiny ant-eater (echidna) of Australia to the indeciduous ancestors of the sloths and armadilloes and their descendants, inclusive of the dolphins and whales, whose teeth, both in the fetal Greenland and adult sperm whale preserve this old type The whales,[3] it should be remembered, have degenerated from the hoofed mammals to suit their environment While, as in the edentates, these teeth may be few, they may also (as in the insectivorous marsupials) approximate those of the reptilia in number (60 or 70 on a side) and characteristic location

The evolution of this primitive, tooth to the bicuspid and molar type has been explained by two theories the concrescence theory and the differentiation The first, advanced by Magitot in 1877, was later advocated by Schwalbe, Carl Röse and Kürkenthal The last was offered by Osborn and Cope Of these two contrasted theories Osborn [4] has given the following lucid presentation

"Now let me illustrate, in a very simple manner, what is meant by the theory of concrescence and how we can imagine that the human molars have been built up by bringing together a number of isolated teeth Placing a number of conical teeth in line, as they lie in the jaw of the whale, they would represent the primitive dentition In the course of time a number of these teeth would become clustered together in such a manner as to form the four cusps of a human molar, each one of the whale-tooth points taking the place of one of the cusps of the mammalian tooth—in other words, by a concrescence, four teeth would be brought into one so as to constitute the four cusps of the molar crown Vertically succeeding teeth might also be grouped Now what evidence is there in favor of this theory, and what is there against it? First, there is this that all primitive types of reptiles from which the mammalians have descended and many existing mammals, as we have noted, have a large number of isolated teeth of a conical form, secondly, we find that by a shortening of the jaw, the dental fold or embryonic fold, from which each of the numerous tooth-caps is budded off in the course of development, may be supposed to have been brought together in such a manner that cusps which were originally stretched out in a line would be brought together so as to form groups of a variable number of cusps according to the more or less complex pattern of the crown What may be advanced agains this theory? This, and it is conclusive to my mind We find at the present time that cusps, quite similar in all respects to each of the cusps which form the angles of the human molar, are even now being added to the teeth in certain types of animals, such as the elephant, whose molar teeth cusps are being complicated now or until very recent times Then we find in the mesozoic period certain animals with tricuspid teeth Now, according to the theory of concrescence these teeth ought not to show any increase of cusps in later geologic periods, but as we come through the ages nearer to the present time we find that the successors of those animals show a very much larger number of cusps How is this increase of cusps to be accounted for? Has there been a reserve store of conical teeth to increase the cluster? No Most obviously to every student of the fossil history of cusps there is no reserve store, but new cusps are constantly rising up on the original crown itself by cusp addition However, do not let me give you the impression that these researches of Röse and Kukenthal are not of the greastest value and interest we shall see later on how the very facts of embryology which are advanced by Dr Carl Röse in support of his hypothesis can be turned against him and used to support the differentiation theory

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[1] Ray Lankester Degeneracy, a Phase of Evolution

[2] Willey The Amphioxus

[3] Haeckel History of Creation p 212 Vol ii

[4] International Dental Journal July, 189[illegible]

"Now let us turn to the differentiation theory and see what evidence we have of that Let us go back to a very remote period of time, through the geologic ages of the pliocene and the miocene, through the eocene, through the cretaceous or chalk period, and even the jurassic Still further back we go to the triassic, and the interval between this and the present period has been estimated at over ten million years Now, in the triassic we find the mammalia, or the first animals which we can recognize as mammalia, possess conical, round, reptilian, or dolphin-like teeth There are also some aberrant types which possess complex or multitubercular teeth

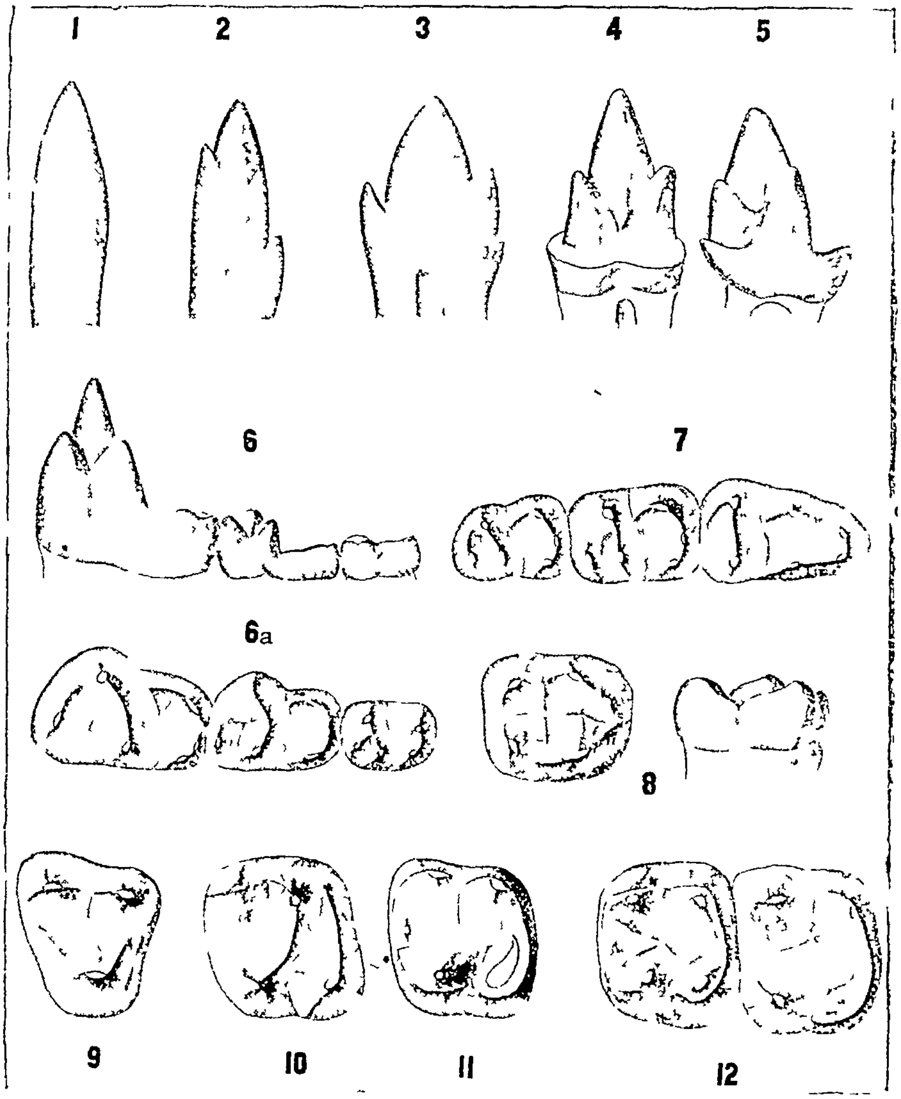

PLATE A

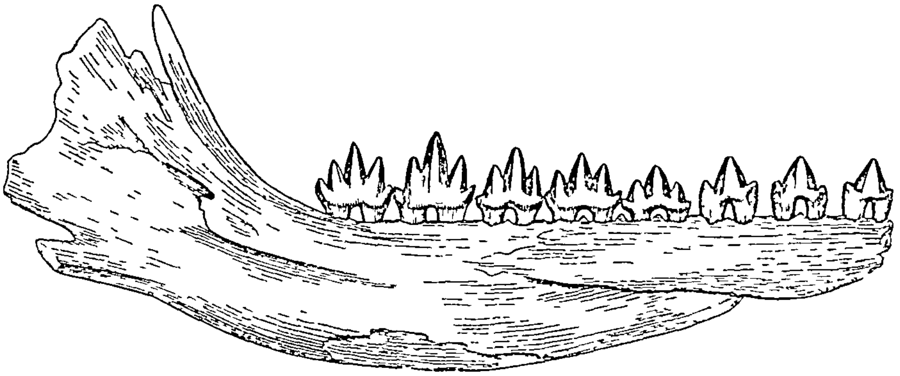

PLATE B

"These teeth begin to show the first traces of cusp addition, as shown in the plate at the beginning of this article and in the accompanying key to this plate Here (Fig 1, Plate A) we have represented the teeth of the *dromatherium*, an animal found in this country in the coal-beds of North Carolina, and on the sides of the main cone are cusps or rudimentary cuspules In this enlarged model you see that on either side of the main cone are two cuspules These teeth were found six hundred feet below the surface in a coal-mine, and in the same mine we find another animal, represented by a single tooth here (Fig 2), in which these cusps are slightly larger These cusps have obviously been added to the side of the tooth, and are now growing Then we pass to teeth of the jurassic period, found in large numbers both in America and in England, but still of very minute size and we observe the same three cusps, but these cusps have now taken two different positions, in one case they have the arrangement represented in Fig B, the middle cusp is relatively lower, and the lateral cusps are relatively higher, in fact, these cones are almost equal in size, these teeth are termed *triconodont*, as having three nearly equal cones But associated with this of *triconodont* is another animal named *spalacotherium*, you see in Fig 5, *amphitherium* To sum up We have a reptilian cone, two cusps added to it, and a heel—four cusps altogether and we shall now see what relation these bear to the human molar First let us turn to some transitional forms Examine a molar of the living opossum, a marsupial, which still distinctly preserves the ancient triangle Look at it in profile, in side, or in top view, and see that the anterior part of that tooth is unmodified This triangle we also trace through a number of intermediate types In this figure (Fig 6) of *miacis* a primitive carnivore, we observe a high triangle and a heel, and when we come to look at it from above (6 a) we find that the heel has spread out broader, so that is as broad as the triangle Now, the three molars of this animal illustrate a most important principle—namely, that the anterior triangular portion of the crown has been simply leveled down to the posterior portion of the crown Compare these three teeth, therefore, and you see illustrated a series of intermediate steps between a most ancient molar and the modern molar of the human type The second tooth is half-way between the first and third Look at the second molar from above and you see it has exactly the same cusps as the first, so it is not difficult to recognize that each cusp has been directly derived from its fellow Now direct attention to the third tooth of the series (Fig 7), for it is of equal significance with the others This tooth has lost one of its cusps, it has lost a cusp of the triangle It is now a tooth with only half the triangle left on the anterior side, and with a very long heel That tooth has exactly the same pattern as the lower human molar

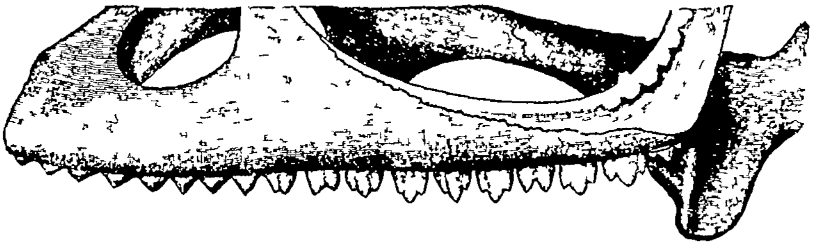

Figure 13

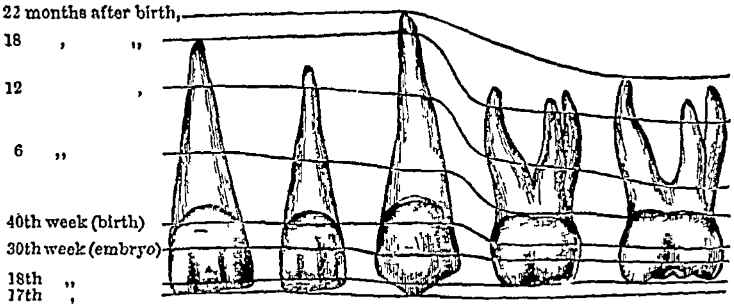

Figure 14

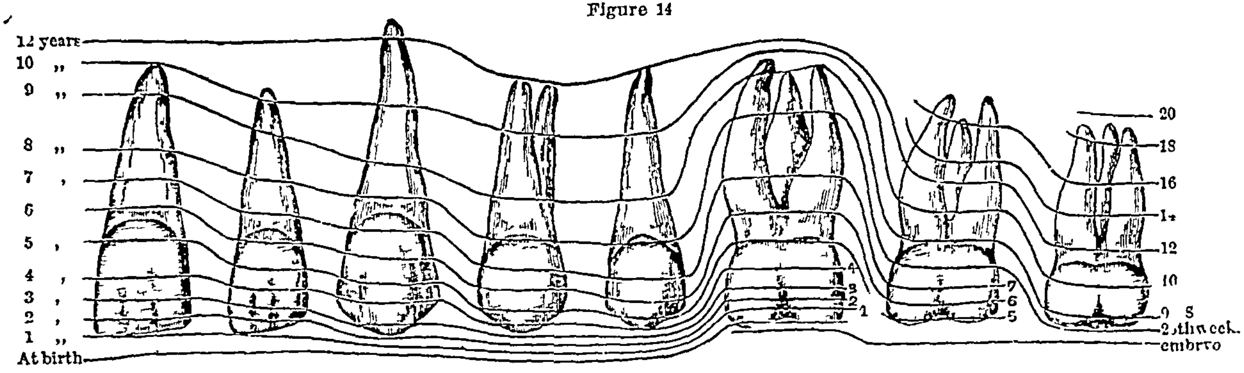

Figure 15

the teeth type of which are represented in Fig 4 This is one of the most significant teeth which we have among all the fossil series, because this tooth illustrates the step that was taken in the transformation of a tooth (triconodont) with three cusps in line to a tooth with three cusps forming a *triangle*, for the primitive cusp is now seen to be the apex of a triangle, of which the two lateral cusps are the base Now, this fact in itself is of great significance, because this tooth in this single genus is the key of comparison of the teeth of all mammalia of the great class to which man belongs By this we are able, as you shall see, to determine that part of a human molar which corresponds with a conical reptilian tooth The stage shown you is the triangle stage the next stage is the development of a heel or spur upon this triangle, as tooth (Fig 8), the only difference is that the heel is somewhat more prolonged. These teeth belong to one of the oldest fossil monkeys, *anaptomorphus*. I have no doubt many of you have observed, in the examination of human lower molars, that occasionally instead of having four cusps they have five. The fifth cusp always appears in the middle of the heel, does it not, or between the posterior lingual and the posterior buccal? You find this in the monkeys and in many other mammals, but I know of no record of the ancient anterior lingual reappearing. So we see that the human lower molar tooth with its low, quadritubercular crown has evolved by addition of cusps and by gradual modeling from a high-crowned, simple-pointed tooth."

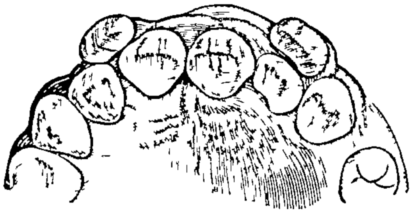

Figure 16

Carl Röse[5] has contributed considerably to our knowledge of the evolution of the teeth. He says: "I find no mention in literature of the development of the teeth of the chamæleonidæ, nor of any other acrodont reptile. As the chameleon possesses multituberculate molars in the posterior portion of its jaws, therefore the development of the teeth in this animal must be doubly interesting, especially with regard to the origin of the molars generally. I examined the heads and jaws of both young and adult animals. Unfortunately, I was unable to procure embryos of the chameleon. All the material was sectionized into series of 20 μ thickness, and doubly stained with alum carmin and bleu de Lyons. The figures have been drawn with Oberhäuser's camera. Figure 13 shows the teeth of the upper jaw five times magnified. The

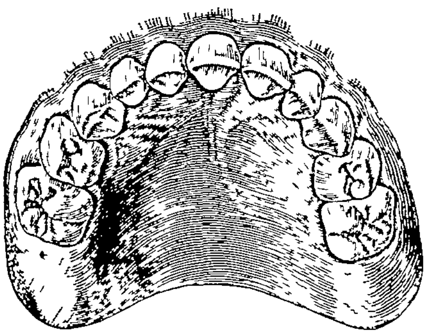

Figure 17

anterior teeth are unituberculate, the posterior ones bi- or trituberculate. All teeth are fused to the edge of the maxilla. *There is no shedding of the teeth in the chameleon*, nor could I prove it to take place in hatteria, but still there is, especially in the upper jaw, behind the functional teeth, a well-developed dental or reserve ridge. On its posterior end there takes place, throughout life, a continuous new formation of teeth. Accordingly, older animals have always a larger number of teeth than young ones. Although I examined macroscopically, with a lens, a number of heads of the chameleon, and microscopically six different series of sectionized jaws, I never succeeded in finding any indications of reserve teeth."

To alienists, biologists, criminal anthropologists and sociologists the human jaw and teeth are of peculiar interest since their study establishes many points in evolution and environment not clearly determinable in other structures. Their study enables the observer without much difficulty to determine inherited and acquired stigmata. For this purpose the teeth should be studied from the first evidence of their development until they are all in place, which occurs normally in most cases, by the twenty-second year.

Teeth enamel is formed from the epiblast, and dentine, cementum and pulp (except as to nerve tissue) from the mesoblast. The enamel organs of the first set form during the seventh week of fetal life, the dentine bulb during the ninth week. At this period the tooth obtains its shape and size and calcification begins at its periphery. This models the enamel cap which fits over the dentine like a glove. When imperfections in hand or fingers exist these deformities are distinctly observed upon the glove. In precisely the same manner are observed the different shapes and sizes of the incisors, cuspids and molars. Calcification of the teeth begins at the seventeenth week of fetal life. Illustration (Fig 14) shows the progress of calcification and development of the temporary set of teeth. Examination will show that any defect in nutrition from conception to birth (due to inherited states or maternal impressions) has been registered upon the teeth. The state of the constitution and the locality registers the date of such defects. Thus, if the tooth as a whole be larger or smaller than normal or abnormally irregular, taint is undoubtedly inherited from one or both parents. If on the other hand, there be defect at any part, on the crowns of the teeth and the contour be perfect, the date of malnutrition can be easily determined by consulting this chart. More or less than the normal number of teeth abnormally placed demonstrate the existence of inherited defect since the germs must have been deposited at the periods mentioned. No absolute rule can be

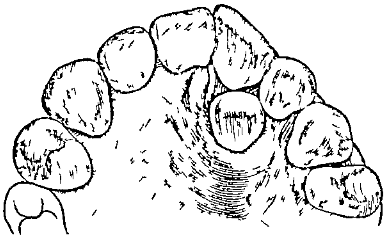

Figure 18

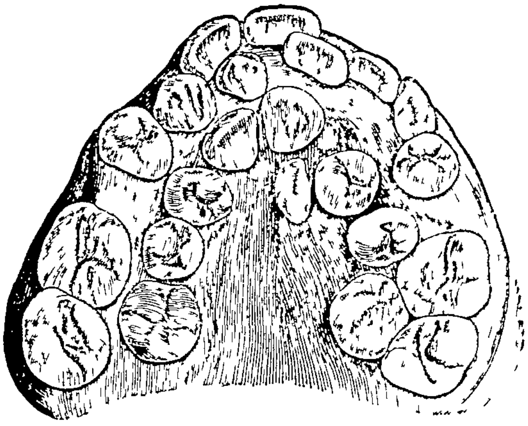

Figure 19

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[5] October, 1893 Dental Cosmos

laid down as to the date of the eruption of the teeth The teeth of the temporary set erupt nearly as follows

	After Birth	Time of Eruption
Lower central incisors	7 months	1 to 10 weeks
Upper " "	9 "	4 to 6 "
Upper and lower lateral	12 "	" "
First molars	14 "	1 to 2 months
Cuspids	18 "	2 to 3 months
Second molars	26 "	3 to 5 months

The enamel organs and dentine bulb for the permanent teeth form just before birth (Fig 15) in like manner with the temporary set They form just above the temporary set on the upper and below on the lower jaw The permanent molars begin to calcify at the twenty-fifth week of fetal life The permanent incisors do not calcify until a year after birth Any deviation in size or contour of the permanent teeth, from the normal, must hence be due to defect in nutrition in the dentine bulb between the fifteenth and twenty-fifth week of fetal life Any deviation in calcification (except the cusps of the first permanent molars) must occur after birth At the third year twenty-four teeth are fairly well calcified At the fifth year the second permanent molars and at the eighth year the third molars or wisdom teeth begin to calcify

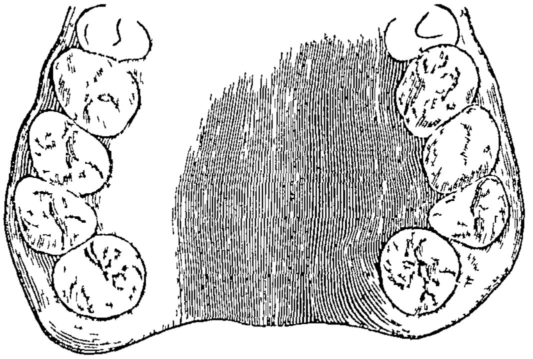

Figure 20

The following table gives the age of eruption of permanent teeth

First permanent molars	Circa	6 years
Upper and lower central incisors	"	7 "
Upper and lower lateral	"	8 "
First bicuspids	"	9 "
Second bicuspids	"	10 "
Cuspids	"	11 "
Second permanent molars	"	12 "
Third " "	"	17 to 24

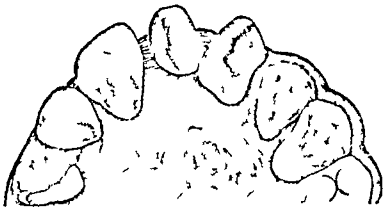

Figure 21

Man at his present stage of evolution has twenty teeth in his temporary, and thirty-two in his permanent set Any deviation in number is the result of embryonic change occurring between the sixth and fifteenth week for the temporary teeth and the fifteenth week and birth for the permanent The germs of teeth which erupt late in life and are (properly) called third sets, of necessity appear ere birth and are completely formed at the beginning of the second year although they remain protected in the jaw until late in life

More than twenty teeth in the temporary or than thirty-two in the permanent is hence an atavistic abnormality

From a maxillary and dental standpoint man reached his highest development when his well developed jaws held twenty temporary and thirty-two permanent teeth Decrease in the numbers meant, from the dental standpoint, degeneracy, albeit it might mark advance in the man's evolution as a complete being Marsh[6] points out that in the New Mexican lower eocene occur a few representatives of the lowest primates such as the lemuravus and limnotherium, each the type of a distinct family The lemuravus, most nearly allied to the lemurs, is the most generalized primate yet found It had forty-four teeth in continuous series above and below The limnotherium, while related to the lemurs, had some affinities with the American marmosets Dr A H Thompson in discussing the "missing teeth" of man remarks that these researches of Marsh suggested and subsequent studies aided the solution of the problem of the origin of the extra teeth (known as supernumeraries) that sometimes occur in man These usually regarded as pure freaks like polydactylism, are however beautiful illustrations of atavism and demonstrate that man during his evolution from the lowest primate has lost twelve teeth These supernumerary teeth assume two forms, either they resemble the adjoining teeth or are cone-shaped While they rarely are exactly counterparts, every tooth can be and is duplicated as the following illustrations show Figure 16 illustrates fairly well fromed duplicate central incisors, the normal incisors being outside the dental arch They are crowded laterally by the large roots of the supernumerary incisors Figure 17 shows an extra right lateral in a temporary set in the upper jaw, Figure 18, an extra right lateral in the permanent set Figure 19 illustrates normally developed supernumerary cuspids which are all grouped

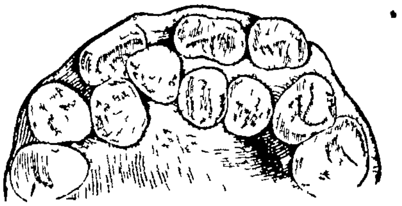

Figure 22

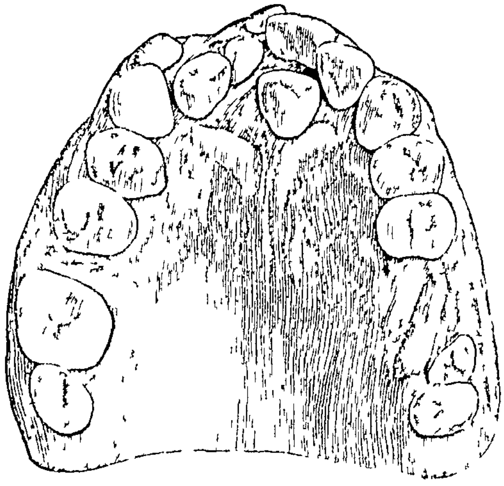

Figure 23

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[6] Vertebrate Life in American Assoc for Adv Science, 1877

Dental Cosmos 1891

together upon the right side, the bicuspids being also duplicated on each side, indeed, all but the molars are duplicated Figure 20 shows supernumerary third molars easily demarcated from the normal molars The teeth, which fail to approximate their normal neighbors, assume the cone shape of the primitive tooth

The fact that the cone-shaped tooth, as a rule, is perfect in construction, is found everywhere in the jaw but especially in the anterior and posterior part of the mouth, is of much value in outlining tooth and jaw evolution especially from degeneracy aspects The upper jaw, being an integral part of the skull and fixed, is of necessity influenced by brain and skull growth, hence degeneracy is more detectable in it than in the lower

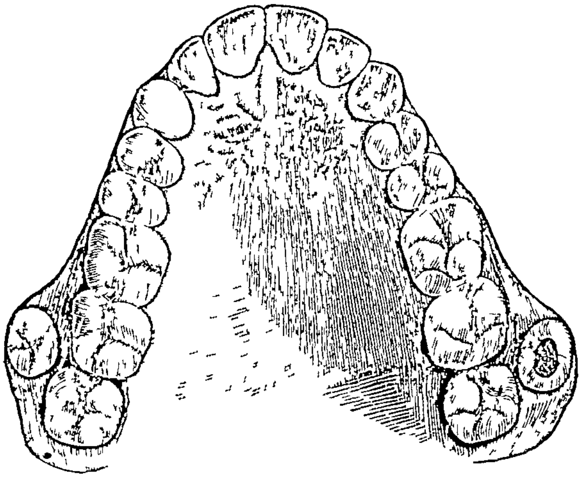
Figure 24

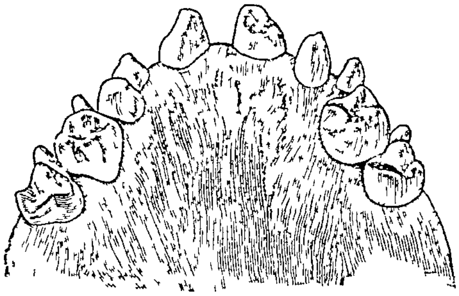
Figure 25

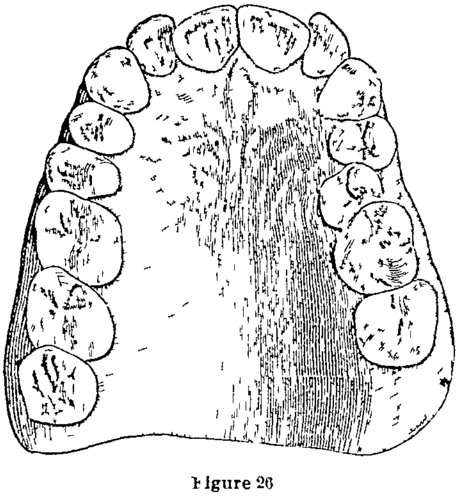
Figure 26

The evolution of the jaw is toward shortening in both directions This shortening will continue so long as the jaw must be adjusted to a varying environment The jaw of man having originally contained more teeth than at present, lack of adjustment to environment produces from the shortening, degeneracy of the jaw and atavism of the teeth While this may coincide with general advances of the individual it indicates that he is not yet adjusted to his new environment The shortening of the upper jaw causes supernumerary cone-shaped teeth to erupt in mass at the extreme ends of the jaw as shown in the following figures Figure 21 illustrates a cone-shaped tooth between the two central incisors, forcing them out of position Figure 22 shows three supernumerary teeth, a cone-shaped tooth between the central, lateral and cuspids out of position The left permanent lateral is at the median line, another cone shaped tooth remains in the vault, while the supernumerary left lateral is in place As many as eight are at times to be observed in the anterior vault Posteriorly these teeth are most often noticed in connection with the third molars usually on a line with other teeth, posterior to the last molar Figure 23 shows two supernu-

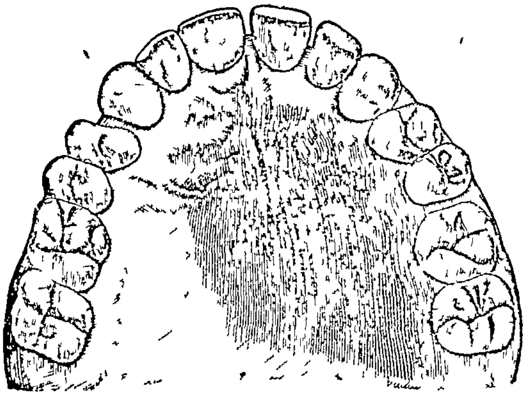
Figure 27

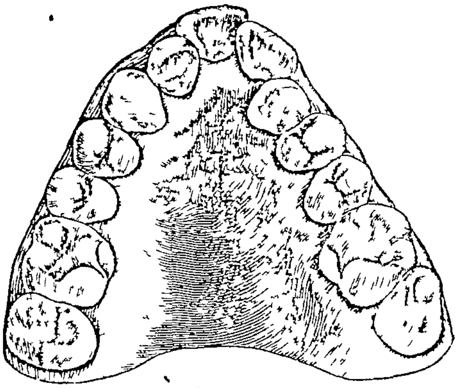
Figure 28

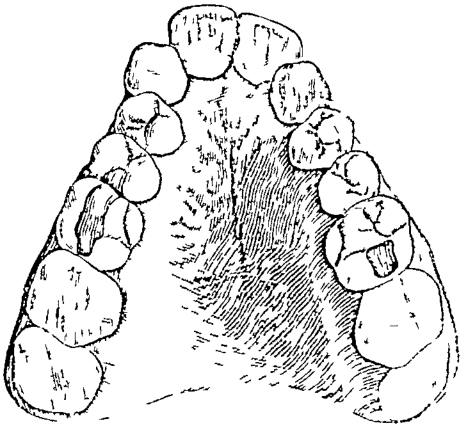
Figure 29

merary cuspids in the anterior and two in the posterior part of the left arch, the molars have been extracted Supernumerary teeth are not confined to these localities but may be observed at any point in the dental arch (Figs 24 and 25) The primitive cone shaped tooth is rarely observed in the lower jaw In twenty-six years practice I have not seen a case The mobility of the lower jaw prevents that mal-adjustment to environment present in the upper

The continual shortening in both directions of the jaw causes the third molars frequently so to wedge in between the angle of the jaw and the second molar that eruption if possible, is difficult The third molar is often absent in the Caucasion races In 46 per cent of 670 patients it was missing Frequently its development is abortive This tooth in the struggle for existence seems destined to disappear It is more often absent from the upper than the lower jaw When absent or badly developed the jaw is smaller and frequently teeth irregularities, nasal stenosis, nasal bone and mucous membrane hypertrophy, adenoids and eye disorders coëxist Figure 26 shows absence of the left third molar with irregularities of that side of the arch In Figure 27 both third molars are seen to be missing coincident with irregularities on both sides of the arch Anteriorly the lateral incisors are most often wanting, 14 per cent of the laterals were wanting in 670 patients In the progress of evolution man has lost one lateral upon each side of the mouth and the second lateral seems also destined to disappear In Figure 28 the left lateral incisor has disappeared and in Figure 29 both lateral incisors are absent Not infrequently does it occur that centrals, cuspids, bicuspids and even molars are absent, even their germs are not detectable Figure 30 illustrates a cast showing three supernumeraries in the anterior part of the mouth and but two molars The absence of teeth indicates lack of development of germs due either to heredity or defective maternal nutrition of the line of conception or during early pregnancy

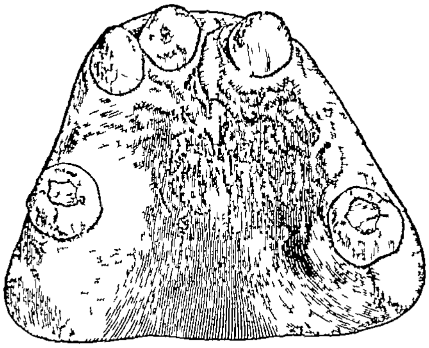

Figure 30

(*To be continued*)

ERB S PRIMARY MUSCULAR ATROPHY

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5-8 1896

BY ELMORE S PETTYJOHN, M.D

MEDICAL SUPERINTENDENT ALMA SANITARIUM ALMA MICH

Since Duchenne first described progressive muscular atrophy in adults and infants and regraded *each* form as of *peripheral* origin, the study of the clinical history and pathology of muscular dystrophies has only partially decided which are of muscular and which of spinal origin We now believe that the hereditary form found during infancy and early life, especially if it attacks several members of the same family, is of muscular origin, and certainly so if there are present postmortem hypertrophied muscular fibers side by side with atrophied and degenerated fibers, and with no changes in the anterior horns of gray matter of the cord nor in the nuclei of the fourth ventricle or aqueductus sylvii

One chief reason for considering this much talked about disease is the desire to establish a definite symptomatology, to accomplish a differential diagnosis and arrive at the rational treatment for the benefit of the patient, rather than to originate classifications

Idiopathic muscular atrophy is primarily a disease of childhood and youth and usually develops before the age of 20 It is more frequent in males than females, probably due to transmission through the mother, though she herself is exempt, as the son usually inherits the peculiarities of the mother and the daughter those of the father In this way it is hereditary in three-fourths of the cases, and often appears in several members of the same family, but usually of the same type in the different members of the same family

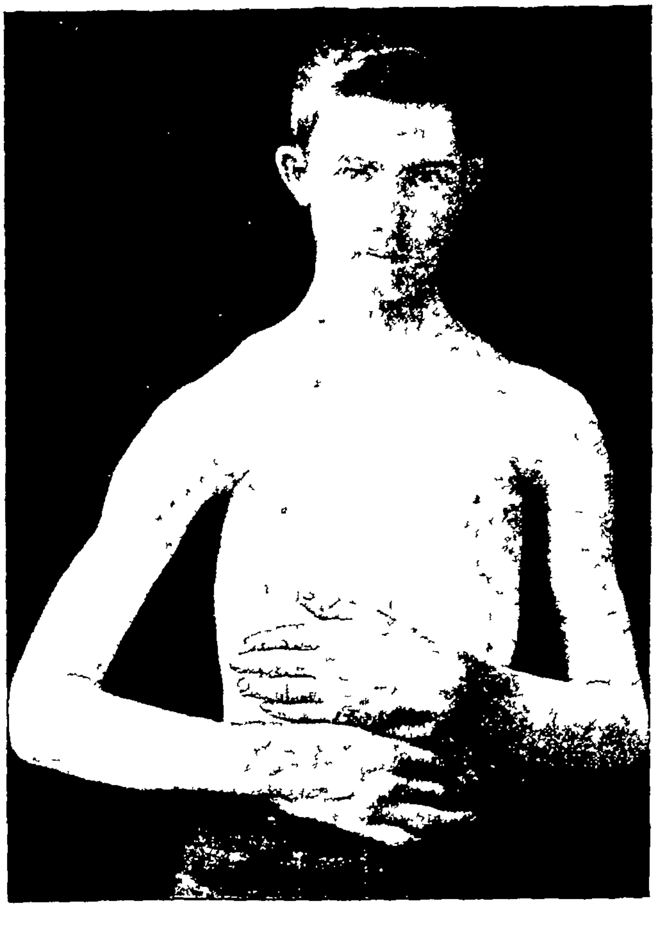

Fig 1—Primary muscular atrophy Age 22 Left side shows more atrophy than right Hands large by comparison Right shoulder droops Pectoral muscles wasted Forearms unaffected Dr E S Pettyjohn Case 1

The onset of the disease is gradual and the atrophy and weakness progress simultaneously with or without any initial hypertrophy In the parts affected the disease slowly increases and thence spreads The shoulder girdle is first affected, i e, the pectorals, the trapezii, rhomboidii, latissimus dorsi, the upper arm muscles and the supinators, and later the forearms, glutei, thighs and legs The patient is often unaware of the wasting of these muscles on account of their relative unimportance The deltoids are rarely involved and the serratus magnus often escapes noticeable changes

On electrical examination the irritability of the affected muscles is usually lessened, on the use of either current and either pole, out of proportion to the atrophy present The typical reaction of degeneration is not present, however, the action is not entirely normal Were we to divide the *reaction of degeneration* into three stages they might be designated Simple atrophy, atrophy with muscular cell proliferation and atrophy with muscular cirrhosis The reaction found in this disease would be that of the first mentioned stage Febrillary twitchings are absent, though not invariably, and the sensibility to the faradic current and heat and cold is usually unimpaired

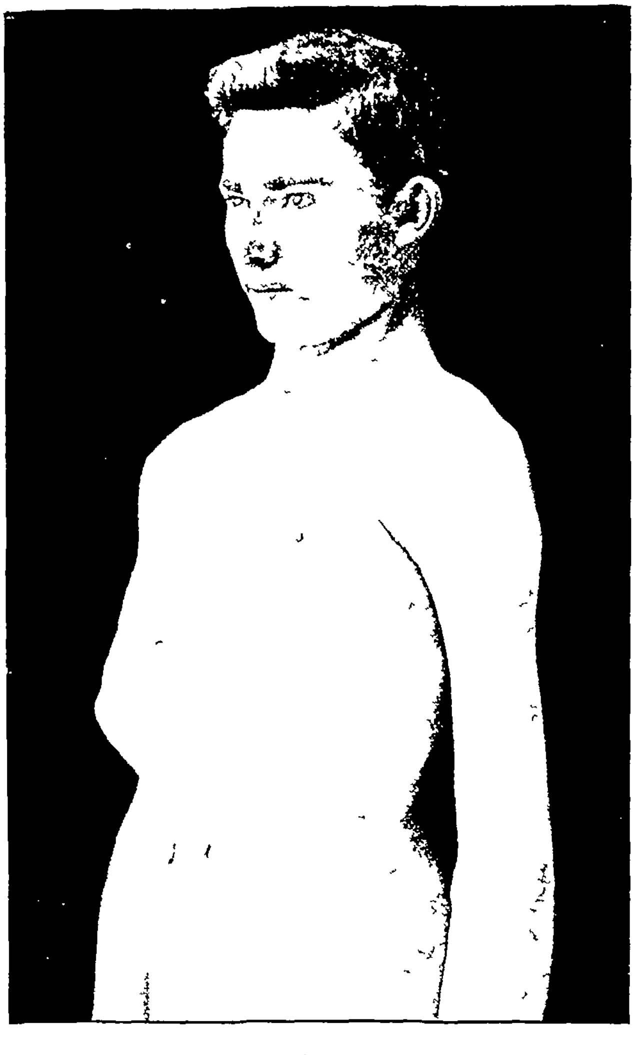

FIG 2—Chest expansion nipple line 37 inches tip of sternum 40½ inches Intercostals unaffected Biceps atrophied with deltoid and pectorales (Conditions not well shown in the picture) The scapulæ are drawn up by the trapezius and levator anguli scapulæ in absence of opposition Dr E S Pettyjohn Case 1

The absence of nerve irritation alone would seem to prove the atrophy to have begun in the *end organs* of the nerve, and also in the *nerve* itself Implication of the nerve is shown by the increased action of the muscles when the electrode is placed over the motor point, as compared with the reaction obtained when placed over the muscles The reflexes are weakened or lost, never increased The sphincters are not affected The disease is painless

Aside from heredity, acute febrile diseases, especially scarlatina and diphtheria, and over-exertion, lack of good food and exposure to vicissitudes of the weather undoubtedly enter into the etiology The course and duration (from ten to thirty years) of the disease are exceedingly variable, but can undoubtedly be influenced by treatment Death usually occurs from some intercurrent disease

The treatment in its prophylactic form should include the prohibition of marriage of one so afflicted, and of bringing into the world other children by parents the physical *combination* of whom produced such dystrophies *Infants of such mothers should be* reared by a wet nurse or by artificial feeding All children of families where disease exists in one member, should be reared *hygienically* with every effort to increase and develop the muscles of the body symmetrically

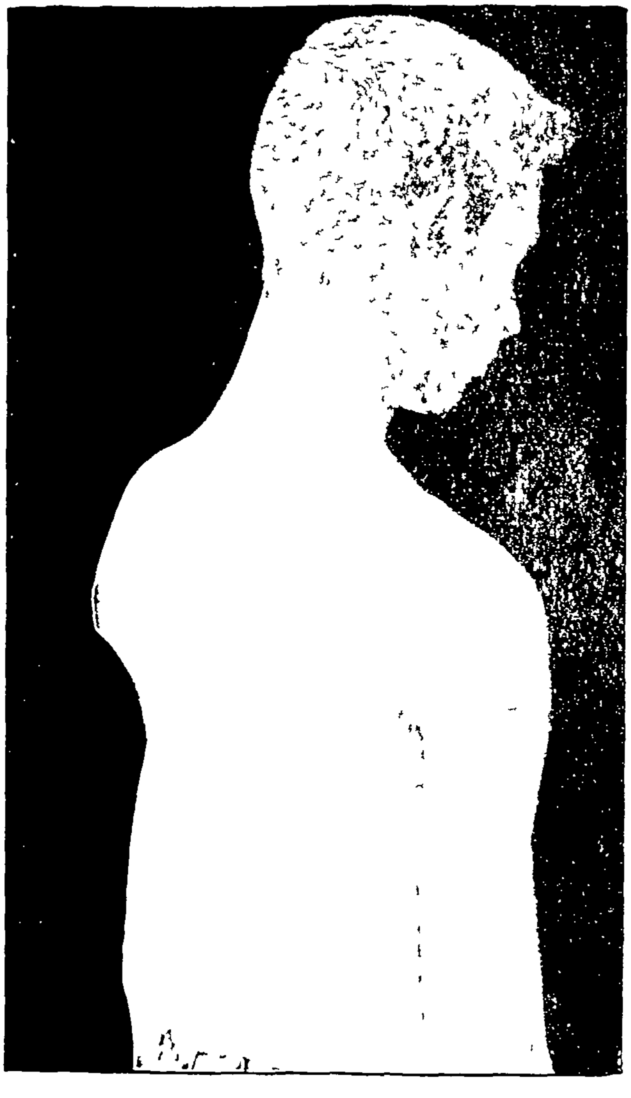

FIG 3—Wing like projection of scapulæ showing atrophy of trapezii and serrati Drooping of right shoulder Triceps complicated as well as the entire shoulder girdle Age 22 years Began at 11 years Dr E S Pettyjohn Case 3

The active treatment should combine every useful agency to prevent nutritional deterioration of the skin, the muscles and the nerves supplying them The cleansing of the skin and mild el [illegible] from has been shown to increase the assimilation and nutrition of the underlying muscles Fomentations, followed by cold sprays, stimulate to greater activity the circulation of the part Light friction continued for a considerable length of time and frequently repeated, especially with camphor liniment increases the cutaneous nutrition

For the muscles, methodical, graduated exercise with or without apparatus (never tiring the muscle) will increase their nutrition In addition to this, *massage*, skillfully used by the hand of an operator who understands the anatomy of the part and can *select* the various groups affected for treatment, is a most excellent aid to increasing the nutrition of the muscle The wasted and degenerate tissue of the muscle is forced into the circulation, the blood vessels and lymphatics are emptied of the already accumulated débris and new material is brought to increase every elemental part This treatment should be given twice daily, gradually increasing the force and time occupied Electrization of the affected muscles and those in the immediate region, especially with the sinusoidal current, should be practiced daily This should be done in an especial manner to every affected muscle The current ought never to be strong nor continued until the sensibility is greatly increased The current in use should rather be diminished than increased One or two minutes should be allowed to each muscle, when the current should be distributed over several muscles, the entire séance lasting only from fifteen to twenty minutes, depending upon the area of the muscles affected

The static current and alternating hot fomentations and ice to the spine, to stimulate the nerve centers supplying the affected groups of muscles, augments the innervation and increases the nutrition

The very best internal remedy is, in my opinion, *wholesome, nourishing food*, a generous mixed diet combined with long hours of rest in bed and prolonged undisturbed sleep Strychnia preparations combined with quinin are the best tonics As the hemoglobin and the number of blood corpuscles are neither diminished, iron is not especially indicated

I report a case in point Two years ago Daniel L presented himself at the sanitarium and gave the following history Age 19, son of a farmer one of seven children all in good health at the time No neurotic heredity father died at the age of 45, of some stomach disease, mother living, in good health Family history good At 9 years of age had scarlatina and made an uneventful and complete recovery

At the age of 15 he performed a hard day's work, carrying bags and pitching bundles No immediate effects were noticed, but a month afterward he began to notice weakness in the muscles of the chest, shoulders and arms Some time after this these muscles began to atrophy For the six months previous to my first observation the case had grown rapidly worse During this time he complained of being very weak and tired after very moderate effort While swimming his companions noticed the wing-like projection of the scapulæ He gradually grew weaker, so he was hardly able to do milking The family called him lazy, much to his discomfort

On examination the entire shoulder girdle was found affected The upper intercostals and pectorals were so weakened that the breathing was largely diaphragmatic The expansion at the nipple line thirty-seven inches, just below the sternum forty and one-half inches When the arms were at the side the scapulæ projected so that the two hands could be laid between them and not be seen on the line across The trapezii, rhomboidii, latissimus dorsi, biceps and triceps were all affected, the *left side* more atrophied than the right The forearms and hands were not noticeably changed or weakened, although the hands seemed large by contrast He could not put either hand on the top of the head without the momentum of a swinging action for several seconds On trying to lift him from the floor by placing the hands in the arm-pits the shoulders were raised nearly to the ears He walked similarly to one with a lame back The patellar reflexes were entirely absent, but there was no incoordination when standing There were no muscular vibrations, convulsive twitchings nor momentary tremors such as are often found in progressive paralysis The sensibility to heat, cold and cutaneous irritation were unimpaired, though the superficial temperature was slightly lowered, especially in the arms and hands On electrical examination the irritability of the affected muscles was lessened generally, but the increased action of the muscles on both cathodal and anodal opening and closing were more marked when the electrode was placed directly over the motor point The pupils responded to light and accommodation The patient was not especially intelligent, his mental actions being sluggish though his judgment was firm and his emotions under control After six months' treatment on the plans hereinbefore mentioned the patient has gained twenty-six pounds in weight, the superficial temperature of the affected muscles is normal, there is increased strength in the muscles and so far as can be discovered no atrophy in the previously unaffected parts

A few weeks ago a younger brother, a boy of 11 years, was brought to me and upon examination was found to be afflicted in the same way, but in a lesser degree, the commencement unknown There is true atrophy and a minimum amount of adipose tissue along with stunted growth for the child's age

May 1, 1896, the patient has not grown especially weaker and the good fibers are increased somewhat in strength The electric reactions and other physical signs remain about the same His general nutrition has increased somewhat during the past year and there has been no further noticeable involvement of muscles

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GASTROSTOMY BY A CIRCULAR VALVE METHOD

BY EMANUEL J SENN M D

INSTRUCTOR IN SURGERY RUSH MEDICAL COLLEGE, CHICAGO

Gastrostomy, since it was first suggested by Egeberg in 1837 and performed by Sedillot in 1849, has undergone many transformations in the evolution of technique The primitive operations as done by Sedillot, Fenger, Foster, Durham, Langenbeck, Kronlein and Verneuil, consisted simply in making the external incision through the abdominal wall and fastening the stomach in the wound with sutures or steel needles as a support, and then incising it There naturally was no resistance to the stomach contents, the great obstacle to gastrostomy The operation fell into ill repute and practically lay dormant until the present decade, when it was revived and received an impetus in the modern methods of Von Hacker, Hahn, Witzel Ssabanajew and Frank, in the hope of rectifying the disagreeable features that are inevitable in a continual leakage of a gastric fistula It is rather strange when we compare the great mortality attendant upon gastrostomy with that of colostomy, which is the identical operation lower down the alimentary canal, and entails little risk to life under corresponding conditions The mortality varies according to different observers Of 207 cases collected by Gross, 167 were for cancer and 40 for cicatricial stenosis, with a death rate of 29 47 per cent from the operation itself Dr N Senn estimates it at 25 per cent , while Zesas is more radical than either of the other observers, and places the mortality at 60 per cent for cicatricial stenosis and 84 per cent for malignant cases This great mortality is probably due in a great measure to the extreme emaciation which patients undergo before they will submit to operation In stenosis of the rectum, both benign and malignant, we meet with the same conditions, but without such a frightful mortality I am of the opinion that the great shock which so often follows gastrostomy is in a great degree due to the tension exerted on the rich plexuses of the sympathetic system which have such an intimate relation with the stomach This is especially the case when there is considerable contraction of the stomach

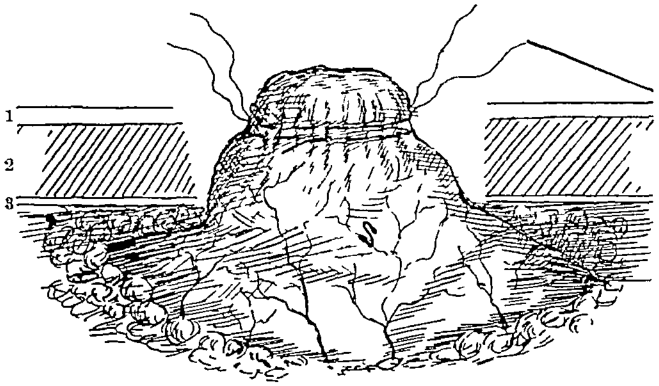


Fig 1 —Puckering strings in situ 1 skin 2, muscle 3, peritoneum, S, stomach

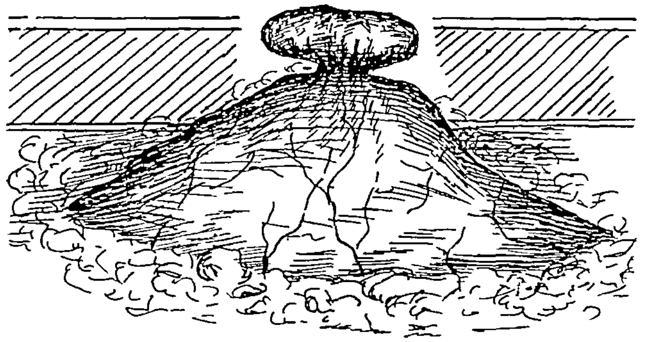


Fig 2 —Puckering strings tied forming a constriction

Before dwelling on the subject of this paper, it will be in order to review the muscular structures of the stomach in a concise manner The muscular coat, which here is exceedingly well developed, consists of three layers 1, longitudinal, the most superficial, 2, circular or transverse, 3, oblique, the deepest layer The use of the muscular fibers are 1, adaptation of the stomach to the quantity of food, 2, to keep the stomach closed until the food is digested, 3, peristaltic movements The contractile power of the walls in the pyloric region is the most energetic, as here more force is necessary to overcome the resistance of the pylorus Nevertheless the stomach throughout its continuity is a powerful muscular organ and its walls tend to contract when stimulated This phenomenon was beautifully demonstrated in the case of St Martin, where the bulb of the thermometer was tightly grasped when placed in a gastric fistula This natural adaptation of the stomach to its contents in the old-fashioned gastrostomy is interfered with to a certain extent by the adhesions which form between the parietal peritoneum and the stomach It is in this area, surrounded by adhesions, that the fistula is made, being a straight incision into the stomach with no pretense of making a valve, or of devising an oblique or circuitous route The strong adhesions to the parietal wall prevented the muscular structures around the fistula to contract or dilate in conformity with the rest of the stomach, and consequently the fistula remained patent It has been my purpose to plan a logical method of gastrostomy to meet the following indications

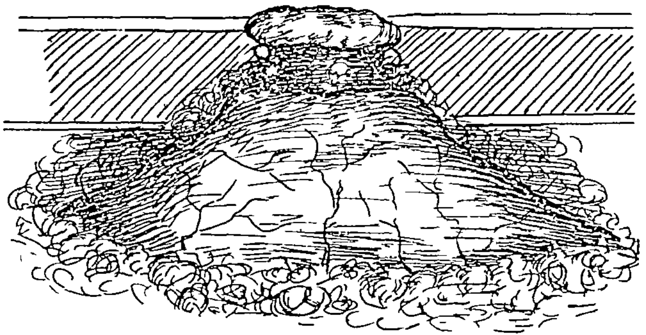


Fig 3 —Omental cuff covering constriction and stomach sutured to abdominal wall

1 To prevent leakage by making a valve of the stomach wall itself, instead of utilizing extrinsic structures to that end, and also for the same purpose to provide a constriction in imitation of a sphincter

2 To minimize shock by putting the least possible strain on the stomach

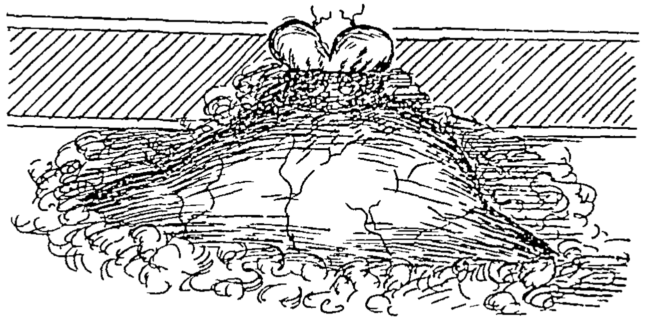


Fig 4 —Inversion of stomach above constriction and sutured with Lembert sutures forming a circular valve

3 To have a fistula which remains closed during digestion and can be opened *ad libitum* for the ingestion of food

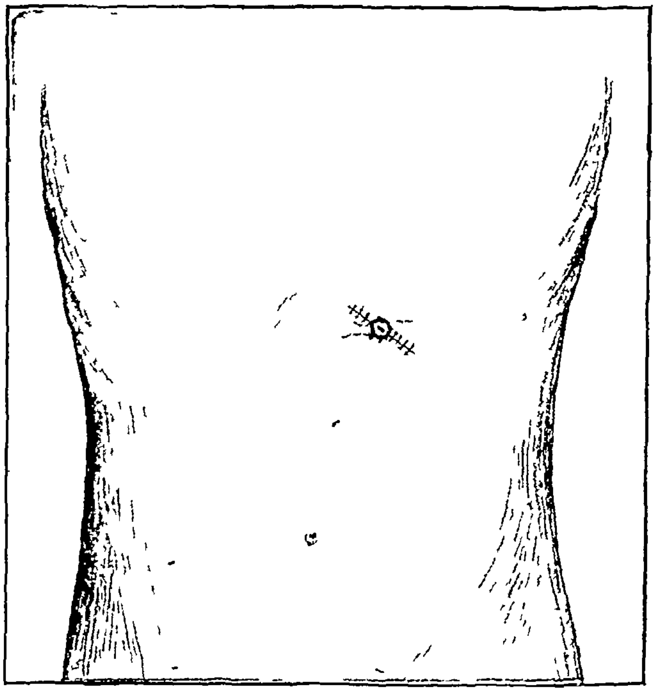
In search of an ideal mechanism, I found a prototype in the valves of veins These valves are, as a rule, semilunar, and allow the blood to flow in one direction, but when there is resistance they are set into action and are infallible to regurgitation I modified the principle by making a circular valve The operation consists of an abdominal incision of about four inches in length, and which can be made in any location deemed advisable, as no abdominal muscular structures are required for sphincter action However, Fenger's incision, which is parallel to the left costal border left of the rectus muscle, is preferable The stomach is seized as near the great curvature as possible and a cone is formed by an assistant, who holds the apex with his fingers or a tissue forceps Two puckering strings of heavy chromicized catgut are placed parallel to each other about two and one-half inches below the apex of the cone These sutures include the serous and muscular coats of the stomach (see Fig 1) These sutures are next drawn taut and tied, forming a constriction or neck (see Fig 2) This end may also be accomplished by folding the stomach with Lembert sutures, but requires more time Next, a portion of the gastro-colic omentum is brought up and a cuff is sutured with fine silk over the constriction (see Fig 3) The stomach is now ready to be fastened into the parietal wound This is done with interrupted silk sutures which include the upper portion of the omental cuff, the peritoneal and muscular coats of the stomach, and all of the abdominal wall except the skin The rest of the abdominal wound is now closed with silkworm sutures, leaving only that portion of the stomach visible which is to form the valve This concludes the first stage of the operation

The second stage can be done at this time or can be deferred for forty-eight hours until adhesions have formed This consists of an incision about one-half inch in length in the center of the portion of the stomach exposed A rubber tube is inserted through this opening into the stomach The stomach wall is now inverted, forming a circular valve The inversion is secured by Lembert sutures of silk (see Fig 4) The tube is now withdrawn and the operation is completed (see Fig 5) If properly performed, the valve should be below the level of the external integument The retraction is greatly favored by subsequent contraction of the wound

This method of gastrostomy entirely obviates the possibility of regurgitation of ingesta There are two barriers against this mishap, the constriction and the circular valve The tendency of the constriction, or neck, is to remain contracted on account of the omento-peritoneal adhesions which surround it It is also under the inherent control of the muscular walls of the stomach itself, as the adhesions to the abdominal wall are above this point This constriction, in all probability, would be sufficient to control regurgitation, but as an additional safeguard, stress is laid on the value of the circular valve, which is invincible to all passage of fluids from the stomach externally The importance of the omental cuff is twofold, in that it aids the maintenance of the neck and acts as a plastic substance to fill in the spaces between the folds formed by the puckering strings, making a continuous surface for suture to the abdominal wall

Following is the report of a case in which the circular valve method was used with most excellent results

Mr M R consulted me Aug 26, 1896, for stenosis of the esophagus Age 48 years, married family history negative He first became aware of difficult deglutition some six months before This gradually became more marked until he had to subsist entirely upon liquid diet Fifteen days before the patient came into my hands, the stenosis became complete The patient was emaciated almost to a skeleton, and presented that cachexia so pathognomonic of malignant disease He lost approximately sixty pounds in weight Upon examination of the esophagus, I found the pathologic lesion at the cardiac end of the stomach With careful manipulation, I was enabled to pass the smallest-sized olive-pointed bougie into the stomach There were apparently two points of stenosis about an inch apart The bougie would become engaged in the upper one, then become free, and finally pass through the lower one into the stomach After exploration there was no bleeding whatever nor did the patient ever have any hemorrhage The diagnosis was conclusive of carcinoma of the cardiac end of the stomach, especially with the aid of the clinical history I suggested gastrostomy as a palliative measure, and after consultation with his family and friends an operation was agreed upon and the patient sent to St Joseph's Hospital The man was so weak, the pulse being only 46, that an operation at this time would most certainly have been fatal He was given 1-30 gr of strychnin hypodermatically every three hours and enemata of milk, beaten eggs and whisky, until August 31, at which time he became somewhat stronger



Operation completed

Operation Before taken to the operating room, patient was given an enema of black coffee, also a hypodermic of 1-30 gr of strychnin Pulse 56 Anesthetic, ether, which was sparingly given and was administered with great care by Dr Homer Thomas

Fenger's incision was made The abdominal wall was unusually thin Immediately after opening the abdomen the stomach presented itself, which I found very much contracted I passed my hand along the great curvature up to the cardiac end, where I felt a hard nodulated mass, which confirmed the diagnosis The point selected for the gastrostomy was at the greater curvature, and as near the cardiac end as possible without putting tension on the organ The first stage of the operation was completed in the manner I described before During the operation, which took twenty minutes, the patient gave evidences of shock and the pulse became almost imperceptible, but he was revived with hypodermics of whisky and external heat I decided to defer the second stage of the operation, that of making the fistula, for thirty-six hours, until firm adhesions had formed. After reaching his bed, the patient rallied. Temperature 99.2, pulse 82. The patient did well until the evening of September 2, when the temperature rose to 101.8, pulse 120. He also coughed considerably. Upon examination of the chest, I found that lobular pneumonia was present, a complication which is very frequent after gastrostomy. I concluded that procrastination in doing the second stage of the operation would be dangerous. The patient was so debilitated that no anesthetic could be given, nor was it deemed advisable to remove the patient to the operating room, so I completed the operation upon the patient in his bed. Four ounces of peptonized milk was then introduced through the tube. This was continued, with the addition of one ounce of whisky every three hours. The pneumonia gradually left and the patient grew stronger. Ten days after the operation he was able to sit up and he left the hospital after three weeks, although the disease was pursuing its relentless course.

Remarks. After each feeding the tube was removed, and at no time was there the least leakage from the fistula. The valve was easily opened with slight pressure of the tube, as was also the constriction. Upon withdrawal of the tube, the valve would close with the precision of a trap-door. I put the valve to the crucial test, by filling the stomach with milk and having the patient cough violently, and shifted him in every possible position to favor leakage, but the valve remained true to its purpose and there was not a vestige of regurgitation, a positive clinical demonstration. The wound contracted so that the mouth of the fistula was the only portion of the stomach exposed.

Note.—Since the preparation of this paper, I find in the *New York Medical Journal* of Nov. 7, 1896, that Dr. Willy Meyer describes a modification of Witzel's operation devised by Dr. Bronislaw Kader, assistant in the surgical clinic of Professor Mikulicz of Breslau. In this operation the stomach is inverted in the manner I describe, except that the inversion is carried to a greater degree by making two rows of Lembert sutures, instead of one, the principle being to form a canal of serous tissue. The rectus muscle is bluntly divided as in the Von Hacker operation, in order to be utilized for sphincter action.

31 Washington Street.

LITHOLAPAXY, SUCCESSFUL REMOVAL, FROM THE BLADDER OF A MAN 30 YEARS OLD, OF A WILLOW TWIG 7 INCHES LONG, WITH HEAVY INCRUSTATION OF CALCIUM PHOSPHATE.

BY W. S. FORBES, M.D.

PROFESSOR OF ANATOMY, JEFFERSON MEDICAL COLLEGE; CLINICAL SURGEON TO JEFFERSON MEDICAL COLLEGE HOSPITAL, PHILADELPHIA.

In the month of September, 1895, I was called in consultation in Johnstown by Dr. A. N. Wakefield and Dr. F. Shill, to see a man about 30 years of age, who stated that he had gravel. The man showed us a small piece of willow twig, half an inch long and about the thickness of an ordinary match, incrusted for half its length with phosphate of lime making the mass one-quarter of an inch in diameter. He had passed this piece of twig from his bladder within a week, also two smaller pieces during the month of January last. He said that in November, 1895, he had shoved up in his urethra a long piece of willow twig and that it had accidently broken off at the head of his penis. As is usually the case with foreign bodies in the urethra, this willow twig had been carried by muscular action back into the bladder. The man was in a good deal of pain and could not lie down without increasing it very much. He could not retain his water longer than an hour. He had had three hemorrhages from his bladder within three weeks, and the last one was so extensive as to frighten him. On sounding his bladder the characteristic "click" was readily obtained. The "click" was observed on the right side as well as on the left side of the bladder. From examination, we concluded that the twig arched over from the right to the left side, the top of the arch being at the summit of the bladder. In consultation it was decided that I should attempt to remove the mass by crushing the lime incrustation with a lithotrite, and as far as possible to reduce the twig so as to remove the entire mass by the evacuator. If this proved impossible it was agreed that I should perform suprapubic cystotomy.

On September 4, in the presence of Dr. Wakefield, Dr. Shill, Dr. Lowman and his son, Dr. John B. Lowman, and other medical gentlemen in Johnstown, the patient was placed under ether by Dr. Wagoner, Dr. John B. Lowman assisting. It was observed that the foreign body had not moved from its previous position. I introduced my lithotrite, a No. 18 F,[1] and readily crushed the incrustation. By screwing down the male blade it entirely severed the encased twig, which was easily cut across. The crushing of the incrustation imparted a very different sensation to my hands from that of cutting the body of the twig. After performing this cutting and crushing for several minutes, the lithotrite was removed, and introducing a No. 25 F. canula, the evacuator drew out quite an amount of broken pieces of incrustations and a number of pieces of the twig. The operation was continued for forty-eight minutes, the bladder being washed out with a warm borated solution. The incrustations and the pieces of the twig weighed 184 grams. The pieces of twig placed end to end, by Dr. Wagoner, measured seven inches in length. The man had no untoward symptoms, was up and about in five days and went home well in ten days.

The action of the new lithotrite was everything that could be desired. Unlike the older lithotrites the present instrument holds in its grasp and then divides into pieces instead of only mashing. I described this lithotrite in a paper read before the American Surgical Association, at the meeting held in Washington June 1, 1894, and published in their proceedings, and also in the *Medical News*, June 23, 1894.

I have now performed twenty-one operations (litholapaxies) with this new instrument. The ages of my patients ranged from a child of 4 years to an old man of 82. Of these twenty-one operations, my first litholapaxies, eighteen are now living and well. The three deaths were occasioned by debility and suppression. They were aged respectively 58, 66 and 74 years. In the case of the man 74 years of age, perhaps it would have been well not to have operated at all, as his debilitated condition (from alcoholism), I told him, would probably prevent his recovery, but as his sufferings were extreme and as there was some hope for him in the operation, I concluded to extend it to him, as he wished

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[1] Recently six Forbes improved new lithotrites were sent to Canton, China, through the Board of Foreign Missions. They were in six Nos. 23, 30, 27, 23, 18 and 15, French. The No. 30 was tested in the testing machine to 680 pounds and remained uninjured.

In these twenty-one cases of litholapaxy, seven of them were operated upon without ether, the bladder having been injected with four ounces of an 8 per cent solution of cocain just before each operation In every case a warm borated solution was used both during and after the operation

The smallest stone weighed 90 grains, the largest 640 grains

Mr Gilbert Barling, F R C S, surgeon to the Birmingham Hospital, England, in the *British Medical Journal* of May 5, 1894, gives the following tables as to the comparative mortality of the three operations, suprapubic lithotomy, perineal lithotomy and litholapaxy, in male cases under 20 years of age This table presents the result of the practice for five years, 1888 to 1892 inclusive, in six provincial and six London hospitals, the majority being medical schools

Suprapubic Lithotomy (males)

Under 10 years			10 to 20 years		
Cases	Recovered	Died	Cases	Recovered	Died
44	34	10	28	23	5

Total under 20, 72 cases with 15 deaths Deducting 3 deaths, this leaves 69 cases with 12 deaths a mortality of 17 4 per cent The reason for this deduction is given in the text

Lateral Lithotomy

Under 10 years			10 to 20 years		
Cases	Recovered	Died	Cases	Recovered	Died
39	37	2	20	20	0

Total under 20 59 cases with 2 deaths Add one death from suprapubic operation after uncompleted lateral making 60 cases with 3 deaths a mortality of 5 per cent

Litholapaxy (males)

Under 10 years			10 to 20 years		
Cases	Recovered	Died	Cases	Recovered	Died
[illegible]	42	1	16	16	0

Total under 20 59 cases with 1 death Add 2 deaths from suprapubic operation after uncompleted litholapaxy, making 61 cases with 3 deaths a mortality of 4 92 per cent

It is manifest from this very carefully prepared table that the rate of mortality in suprapubic lithotomy in young males is much higher than that following perineal lithotomy and litholapaxy in this class of cases And this opinion has since been confirmed by the recorded practice of Indian, British and American surgeons generally

Surgeon P J Freyer of the Bengal Army, India, states in the last edition, 1896, of his most excellent essay on the "Modern Treatment of Stone in the Bladder," that in the government hospitals of Punjab and Bambay alone there were 7,694 litholapaxies performed on patients of all ages in four years, 1891-94, with 255 deaths, or a mortality of 3 45 per cent

In view of this experience, litholapaxy is no longer on trial It is now a firmly established practice and destined to replace all forms of lithotomy, save in very exceptional cases

"By litholapaxy," writes Freyer, "the surgery of the bladder has been truly revolutionized The surgeon who would give his patients suffering from stone in the bladder the best prospect of recovery must practice litholapaxy and, I confidently anticipate, ' adds this experienced and able surgeon, "that with increased perfection in the instruments employed, larger calculi than any hitherto attacked will successfully yield to the operation "

901 Pine Street

PISTOL SHOT WOUND OF ABDOMEN, WITH RECOVERY

BY A E SCOFIELD, M D

TILDEN NEB

July 24, 1896, I was called into the country to see a 14 year old German boy, accidentally shot in abdomen with a pistol from a distance of 8 feet He was quite weak, not much pain unless by pressure, and some dullness over lower abdomen, had vomited twice, temperature 97 5 degrees, pulse 85 The ball had entered 2½ inches from umbilicus at a point 1½ inches below a line from umbilicus to the anterior-superior spine of ileum The sanitary conditions were most unfavorable, the family temporarily living in a 10 by 10 feet granary, with a dirty hen house attached

I informed the family an operation would be imperative and had an abundance of water boiled and returned to my office for assistance, instruments and dressings Being unable to obtain surgical help I invoked the aid of two non-professionals and returned, put the boy on a table out of door and prepared him for the operation Chloroform was given I made a 2¾ inch incision at site of wound No vessels required ligation and no positive evidence that ball had entered cavity until peritoneum was reached On opening the same about 1½ pints of blood was found in peritoneal cavity, most of which was removed and nine holes were found in gut lower jejunum and ileum These were repaired by the Czerny-Lembert suture, with pure silk, the folding in corresponded lengthwise with the long axis of the gut No holes were found through the mesentery Considerable time was consumed searching for injured viscera and twice the pulse became imperceptible, but regained nicely by injecting very warm salines in the rectum Large amount of the same was used in flushing the peritoneal cavity After the rents in intestines were repaired, two rows of chromicized ligatures were put in to close incision, dressings applied and boy placed on a cot in the house and strychnia given hypodermically Temperature was three degrees below normal and very much exhausted Nothing was seen of the bullet, which was a 22 caliber, and as an odd number of perforations was made the supposition was it had lodged in lumen of the gut and would pass, but was not discovered in feces, though sufficient vigilance was used in the search That night he was quite restless and vomited twice Next day he vomited once, but was quite comfortable for the balance of the time Recovery was complete in two weeks, when he was up and out

Despite the filthy surroundings, his temperature kept below 100 degrees and there was absolutely no unfavorable symptoms during his convalescence Tinct opii deod was given when required to quiet, but with extreme care not to prevent the absorbent power of the peritoneum, which does so much for the abdominal surgeon Sulph magnesia was also given in small doses after twenty-four hours and continued until motion of bowels, which was secured by the assistance of an enema of the same in solution

ABOUT FEVER, REFERRING TO NATURAL ECONOMICS

BY WILLIAM S STOAKLEY, M D
MILLBORO SPRINGS VA

The stress which is laid on the hyperthermic condition which nature shows in her attempt to restore the "normal status of affairs" when she is aflame, as the leading symptom to be speedily suppressed by us, is, in my humble opinion, carried something to the extreme

Fever is a signal to us that nature is offended, consequently perturbed, and she takes this course to relieve herself of the offenders If it is only a symptom, it should not draw our attention too far from the cause, which latter, if we can remedy, will lower the temperature as a matter of course This hyperpyrexic mobilization, then, is nature's way to get rid of her troubles, and we are induced to believe that the morbific elementaries are either destroyed or rendered *hors du combat* by this, we think, inhibitory action, when aided in the proper direction by art How many gastric fermentative fevers ("upset stomachs") get well without remedies, through nature's modes General practitioners can not tell the material characteristics of the microorganism that produces the fever, but give them the case, and they can approximate the diagnosis as to whether it be of the fermentative or putrescent type Along with the temperature there are certain "inexplicable pointers" (derivatives of experience) taught clinicians as to its significancy, and the call for remedies as well

Remedial theory can be spun into *dulce* and "catchy" shapes far from the sick-room We admire such perhaps no less, only the bedside indications more Our imaginations may be persuaded adverse to legitimate procedure in making us believe that certain diseases fit such and such drugs We can not see it in that light The converse of this should obtain The "foot should not be fitted to the shoe," because it is not in accord with natural economics

If this theory is not "hewed to the lines" of natural dictation, it is minus the *utile*, and practical, which latter is exactly what we are trying to get at when we don the "medical harness," and get at it too, from every legitimate source, with the freedom of all the sciences as integral aids to the accomplishment of a practical end

As an illustration of one branch in our aid, note the close connection with meteorology

Let us "make haste slowly," and surely as we can There are many ways to accomplish our athermic object, none like the natural way It may be well not to go at this fever with preconceived ideas that to cure the disease it must be hastily controlled, blind to other equally prominent points We may obtund nature, and shut up in the system what should be eliminated as effete and offensive

Doubtless you ask right here "Must we not lower this high temperature?"

Most assuredly we should, and in an humble way I am attempting to give my idea about it

The manner of doing this is a point in successful practice worthy of study The compositeness of the grand harmonic "human machine" must be taken into consideration in this matter, and the laws of compensation likewise never forgetting the controlling power the nerves have over the "driving wheel'

Should we handle them too harshly when perturbed, we bewilder the directors along our pathway, beside, "the machine" will have no mode of intercommunication with its several parts Obtunded nature will not answer to the "fuel in getting up steam' again thus a stasis is apt to occur as the result

Yes, we should endeavor to get the temperature to the normal point, but not by too heavy a blow upon the nerves We may attempt it indirectly by freeing the "escape valves" (emunctories), with an eye to compensation This relief they will answer with a refreshing nap, a good warm sweat, and on awaking a big urination also not infrequently will occur Just here "the madam" (Dame Nature) will smile upon us

To establish a chain of reliefs is what we are "driving at" and what the nerves call for, and what will lower the temperature by normal stages, and draw the smile above noted

This one symptom of fever may be made up of a combination of other symptoms, some of them of more import to us to look after than the high temperature The most obstinate of all cases are those with less prominent temperature Every physician knows that, as a rule, the gravity in pneumonia is proportioned to the lack of thermic indications Witness those old cold, sweaty fevers, on and in the vicinity of rice plantations Here, fever is not much of a symptom, but the want of it is Indeed, there are some "ugly" and "scarey" presentments made to us in adynamic fevers when the nerves have been overwhelmed, and through them the heart, right in the start, and the case is "dead all over' because the "big wheel won't go We attach fault to this latter organ (the heart) sometimes wrongly, and "whip it up" with strophanthus and other drugs, when really we have failed to clear the life giving stream by looking to our "safety valves," and this because so much of our attention was centered on "smothering" the morbific elementaries (noso germs) in their "hollows" This way is all right and proper so far as it goes, and all of us believe in this mode of medication still, we must look to the dictates of the *vis naturæ* first, especially so when these are made with such emphasis

Modern medicine is an illustration of "history repeating itself" in some ways, notably in the treatment of typhoid fever with alterative doses of mercurous mild chlorid and successfully, too The late adjuvants which we owe to our never-tiring chemists have given us an impetus in the right direction, and doubtless with them in the near future we shall overturn many of the old plans of procedure, and extract from them at some time whatever points of value they may possess

The power of this organ (the heart), which of late has been giving us so much trouble, we must remember is derived from a chain of interacting connectives, each dependent on another The cause of this trouble opens a field for study, inasmuch as the affection is of such frequent occurrence now, compared with its rarity in time back

When we take into consideration the interdependence of every link in the chain of our existence, it is patent that we should conserve with no partiality There is hope in unison if it be only feebly expressed

To sum up and conclude It is not intended to condemn any other plan of lowering the temperature in fever, that this is written, only to [illegible]ocate one which experience has shown to be a [illegible]c, a well-pleasing to the economy

THE DOCTORATE ADDRESS DELIVERED AT THE COMMENCEMENT OF THE ILLINOIS MEDICAL COLLEGE

BY SETH SCOTT BISHOP, M D , LL D
Professor of Diseases of the Nose Throat and Ear, Professor of Otology in the Post Graduate Medical School and Hospital, Surgeon to the Illinois Charitable Eye and Ear Infirmary, etc

Members of the Graduating Class In conferring the degree of Doctor of Medicine upon you to-day, the honor and privileges conveyed with the title are not likely to be underestimated or forgotten But you should be reminded that in accepting the privileges of physicians, you assume at the same time duties of the gravest nature Your relations to the members of the community who will entrust themselves to your care are changed Such relations become as sacred and inviolable as those existing between priest and parishioner—between lawyer and client Your duties will involve an intimate knowledge of their affairs, their habits and their characters, such as no other professional relation in life conveys

Our laws recognize, protect and dignify this high position which is maintained by every honorable physician In the safety vaults of your memories will be treasured those confidences and secrets that are poured, confession-like, into every Doctor's willing or unwilling ears In your power may rest the integrity and the happiness of families, the destiny of citizens and the sanitary welfare and safety of communities

Let your influence protect the home and the family Let your force of character encourage and uplift the fallen victims of disease and despair Let your superior knowledge, skill and judgment protect the community from the devastating contagion of epidemics

Modern medicine has increased your power for good many fold over that of your ancestors It is truly a great privilege to practice medicine in the losing years of the nineteenth century We possess mastery of medicine not dreamed of by our plodding orefathers The refinements of diagnosis made posible by the microscope, and the improved processes f the laboratories of chemistry and bacteriology, the prevention of diseases and their spread by vaccination and the antitoxins the concentration of drugs and the extraction of their alkaloid principles, united with the palatable and elegant products of advanced pharmacy, the various adaptations of electricity to the service of medicine, with the Roentgen ray accomplishing the seemingly impossible, the economic division of labor, typified in the various specialties of medicine, permitting and enforcing the highest degree of perfection in every branch of medical achievement, place the advancing science and art of modern medicine above all others of vital importance to the well-being and the life of mankind

No sphere of human activity excells the achievements of the coördinate sciences of medicine, and the brilliant accomplishments of surgery, and we may be permitted to indulge a pardonable pride in the part played by members of our own local profession in the great scientific drama of our day

Let these truths broaden your views and stimulate you to put forth your best endeavors to achieve the highest ideals of attainment Be not content to drone your lives away like tow-path mules of medicine Rise above mediocrity Strive to out-strip all runners in the race With every nerve and muscle tense, leap forward to the goal

Above all things, be studious Be the first to know each new discovery An ignorant doctor is an unpardonable sin Doctor means learned You should be learned above all your neighbors You should be looked to as a leader in your community You should diversify your learning beyond the confines of medicine, and to broaden your culture, you should strive to excel in some important branch of learning If you live in a mining country, let geology occupy your leisure hours, for they will not be few in the first years of practice Geology and mineralogy may lead you to a mine of wealth

The profession and the people would profit alike if the able physicians of America, like the brilliant professors of foreign lands, of whom the erudite Virchow is an illustrious example, would engage in the study and actual practice of political economy The philosophy of good government is a subject worthy of the work of the best minds a great country can produce In such lands as Germany, Italy and the South American Republics, physicians of culture honor themselves and their profession in the highest councils of their governments

When will the people of America awaken to their own most vital interests, and dedicate a government bureau, with a medical head, to the cause of disease-prevention, State medicine and higher education? We are blessed with a department of agriculture that predicts the weather, a department of war that relieves us of our surplus millions, a department of law that really fights the nation's battles The time must come when State medicine shall be represented in the National government, to protect against invasions of contagious diseases and to safe-guard the nation's health in every quarter Our local profession contains within its ranks the ability and the experience to organize, equip and properly conduct such a department of State

Not until the government of the United States recognizes the vast possibilities of State medicine to conserve the health and vigor of the nation, and to save the great waste of human life that modern scientific research has rendered preventable, can it lay claim to being abreast of the times and the first of the nations of the earth

It has been the custom in the past to say to graduating classes " Your school days are ended You now enter upon a life of activity, a career of usefulness," etc, but in these days of post-graduate schools, in which a college education can be supplemented by actual experience in the practice of medicine, your schooling should not end with a blue ribbon and a sheepskin Time was, when no physician was considered to have been initiated into the highest degrees of proficiency until he had crossed the Atlantic and walked the wards of the Old-world hospitals

The conditions are changed American teachers of to-day stand abreast of the world These are not idle claims They are not only verified by Americans conversant with European teaching and practice, but are substantiated to the satisfaction of European scientists who visit our schools, laboratories and hospitals It is evident, then, that you may enjoy the advantages offered by home institutions of learning to perfect yourselves in post-graduate work with far less loss of time and money than it cost your predecessors But travel enlarges the views, expands the intellectual horizon and broadens culture Visits to foreign countries lend polish to the manners, evoke the spirit of tolerance and stifle bigotry The diversified teachings of Old-world medical centers will arm you with those principles and methods that contribute to a finished education and a successful practice.

Therefore, let those who have walked the beaten path you are to tread exhort you to cap the climax of a collegiate course with the practical knowledge and skill obtainable under the direction of eminent specialists in hospital and dispensary practice, first at home, and afterward abroad.

It is appropriate at this time to tone down the roseate hues of your imaginative pictures of the future with the neutral tints of reality.

> 'Tis pleasant, sure, to think you'll own [illegible]
> A mint's a mint, although there's nothing [illegible]

A diploma is not a lien on the public [illegible] That pretty and attractive sign you [illegible] with the big M.D. in shining letters [illegible] glittering silver is not an unfailing [illegible] the masses of suffering humanity [illegible] giving presence. The [illegible] stored within the [illegible] of the [illegible] quick appreciation and admir[illegible] truth be spoken [illegible]

You now set [illegible] under the [illegible] the plaudits of [illegible] and [illegible] and flowers [illegible] bouquets of [illegible] ing storms of the [illegible] schooling [illegible] you in the [illegible]

We [illegible] will meet with [illegible] with a [illegible] practice. [illegible] times [illegible] doned by the [illegible] their [illegible] moved [illegible] grizzled [illegible] parchment and [illegible] he lives. [illegible] mind. [illegible] work—[illegible] hard cases. [illegible] cases, [illegible] individual [illegible] while [illegible] benefit [illegible] should [illegible] you sh[illegible] fill, when [illegible] devotee of the [illegible] phelec [illegible]

Another [illegible] you [illegible] sleek, [illegible] You, [illegible] that it is [illegible] honor [illegible] nod, a [illegible] hand toward [illegible] form him [illegible] heard [illegible] better [illegible] and so for [illegible] you know [illegible] mill, and [illegible] depths of [illegible] vows that [illegible] Und[illegible]

brother of your neighbor, boastful and sleek, but he with his more careless exterior he reveals unmistakably a soul of truth and honor. His sympathetic words of cheer and sound advice awaken in your heart. He stands like an oasis in a desert, like a tower of hope, and you linger in his presence and cling to his personality. You feel him worthy of your trust and love; no trust is violated and no confidence is betrayed. With a mind well stored with medical lore, with a wealth of the richest professional experience, with a broad philanthropy that the world has [illegible] with [illegible] abundance, this noble man of the healing art [illegible] the name of physician from the [illegible] [illegible]

[illegible]

town, Md He related several cases of fever lasting from two to six weeks, or sometimes longer, lacking the characteristic symptoms or lesions of typhoid or malarial fever and not due to any definite lesion He gave the points of distinction between the two cases related and typhoid fever In many instances he treated the patients symptomatically He finds that antipyretics were useless and harmful Phenacetin is very successful in his hands

Dr JOHN C HEMMETER asked what were the latest views concerning gastric fever, some persist that such fevers do exist and others that they do not

Dr BIRNIE said that no microscopic examination had been made in these cases and he was of the opinion that gastric fever was more of a gastric catarrh

Dr OSLER said that he had no personal knowledge of gastric fever

Dr CHAS M ELLIS of Elkton, has had similar experience as that related by Dr Birnie

Dr A S MASON of Hagerstown, said that such cases as those related by Dr Birnie were known to physicians and he was inclined to call them continued fevers In some cases quinin had no effect at all He referred to an epidemic that spread over this country twelve years ago, he had sixty or seventy cases, and typhoid cases from polluted water, but also many cases with no local disturbance He did not know the classification of these fevers

Dr GEORGE J PRESTON said that the subject of continued fevers was of great practical importance and spoke of the physiology of heat and cold production on fevers We do not give due weight to the physiologic questions in the study of this fever We often have distinct hysteric fever running over weeks, these are rare cases, but they do occur We rarely see these cases in the hospital, because these mild cases do not enter the hospital as a rule We do have certain cases in typhoid fever, such as walking typhoid fever, which is made known by the relapse The enlargement of the spleen and liver are not diagnosed The diazo reaction has not met with much success in his hands There are many cases of fever in which quinin is of no use

THE NATURE AND TREATMENT OF GASTRIC ACIDITY

This was the subject of a paper by Dr JOHN C HEMMETER He asked if there was a distinct lesion in these troubles or not, that had been the question often asked Not arriving at conclusions, he examined the gastric contents after double test meal of Salzer In these two consecutive meals representing an ordinary diet one can determine the number of important pathologic states in gastric digestion almost without further analyses These test meals consist, first of a cup of milk and a plate of rice with a piece of bread, followed four hours later by a roll and a glass of water If the stomach contents be removed one hour after the second meal there should be no remnants if the stomach is healthy Proteid remnants, such as meat and eggs would point to an acidity, while a hyperacidity would be indicated by a large amount of carbo hydrates in the remnants After some few words on the digesting power of the stomach, he concluded by some important directions on the dietetic treatment of this trouble

Dr GEORGE J PRESTON read a paper on

CEREBRAL SYPHILIS

The symptoms of this trouble are very varied and the history of the primary lesion is often uncertain Moreover, the interval between the primary lesion and the brain trouble may be so long as to make the connection between the two uncertain Meningitis from syphilis is nearly always chronic, the symptoms coming on gradually, the first one being headache, then there may be paralysis of the third pair of nerves, or the fourth or sixth, then there may be hemianopsia The most common form is great mental depression, or rather apathy He related six typical cases illustrating some of the most important symptoms of cerebral syphilis We should make our diagnosis and then treat vigorously This method of treatment is much more used in this country than in Europe, hence the better results obtained here He has given as much as 300 to 500 grains of iodid of potash a day and we are justified in doing this He thinks that mercury very materially helps the iodid

Dr E N BRUSH thinks that the interval between primary lesion and the brain troubles is much longer than Dr Preston intimated in his paper In one case he has given 900 grains of iodid of potash a day He does not believe in the therapeutic test and does not think that because a patient can take large doses of the iodid that it should be treated as specific some syphilitics can not take large doses while those who have never had the disease can often stand very large doses

Dr JOHN WHITRIDGE WILLIAMS read a paper on

MALARIA COMPLICATING GYNECOLOGIC OPERATIONS

He spoke of the importance of examining the blood in all febrile conditions, and the necessity for great accuracy and said that post partum fever was more frequently attributed to puerperal fever than to malarial fever and that there were few references to malarial post partum in the text books He had had two cases recently In the first the examination of the blood had given him great confidence and had allowed him to exclude sepsis In the second case neglect of the blood examination had resulted in a faulty diagnosis, and as a consequence an operation was performed, although as it turned out, this operation was entirely justifiable These two cases convinced him of the importance of blood examination in all febrile cases after labor, even though malaria be suspected He is confident that malarial fever is often mistaken and treated for other post partum fevers

Dr J M HUNDLEY said that he had several cases of late in which malaria complicated gynecologic operations, and the blood examination had made the diagnosis certain He thought that this year especially, such malarial complications were more common

THE CYSTOSCOPE IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE FEMALE BLADDER

This was the subject of a paper by Dr J M HUNDLEY Heretofore the treatment of these diseases has been unsatisfactory Drugs internally and washing out the bladder were the two methods of treatment used Through the skill of Dr H A Kelly, the modern cystoscope has been so perfected that the interior of the bladder may be examined and treated and the openings of the ureters may be seen The bladder is more frequently subject to organic disease than was previously believed before the use of the cystoscope Not only uterine, but also rectal diseases cause an irritable bladder He thought that the routine examination of the bladder with the cystoscope should be made in every gynecologic case, whether the complaint was referred to that organ or not He related two cases attesting the value of the cystoscope in his line of work and urged the profession not to neglect this modern means of diagnosis

Dr A C WENTZ of Hanover, Pa, related a case in which he applied ichthyol ointment on the balloon to the interior of the bladder, as recommended by Dr Clarke He also used applications of 10 to 15 per cent nitrate of silver

TO WHAT EXTENT DOES THE HYPERTROPHIED PHARYNGEAL TONSIL ATROPHY AT OR ABOUT PUBERTY?

This was the subject of a paper by Dr S K MERRICK He had been struck by the frequency with which the family physicians had told parents that the enlarged pharyngeal tonsils of their children would disappear spontaneously at from 12 to 14 years of age Indeed he had found that several of the text books gave this same opinion, or else avoided the question altogether He had been able to collect a few statistics from his own practice and in all cases which he had seen which have refused operation in childhood, in none of them have the tonsils disappeared at puberty There is some information obtained in observing the ages at which patients applied to him for treatment, out of fifty cases operated on in 1895 and 1896, sixteen were under 14 years of age, while thirty four were above that age If the tonsils atrophied after puberty it is strange that so many cases come to operation after puberty We may conclude that an insignificant number of hypertrophied glands will disappear at puberty if left to themselves Not only this, adenoids make a patient prone to repeated colds as other throat affections and may become tuberculous in character

Dr JOHN N MACKENZIE said he had never allowed the case to reach puberty without operation It is amazing what troubles these pharyngeal growths may cause and what fearful inroads these troubles make in the health He had operated on infants in arms The growth should be operated on as soon as discovered and should never be allowed to proceed unchecked. He spoke of the great disfigurements of the countenance from this trouble and the affections of hearing, etc

THE EARLY SYMPTOMS OF GENERAL PARESIS

This was the subject of a paper by Dr GEORGE H ROHE. We should look for the early symptoms although the results of treatment are not encouraging The diagnosis must be made from a collection of symptoms of partly physical and partly psychical The disease generally begins after the thirty-fifth year and rarely after the fiftieth Those in the higher walks of life are attacked by preference and men more than women Clergymen are almost exempt and actors are most frequently affected Syphilis may be one of the causes The symptoms are various and the treatment is unsatisfactory and rarely does more than prolong life a few years The iodids may be given

Dr Edward N Bush was much pleased with Dr Rohé's paper He thought that the early symptoms of paresis occurred in this order 1, vasomotor, 2, motor, and 3, psychic Sometimes depressing ideas usher in the disease

Evening Session

Dr Wm Osler presented a case of diffuse scleroderma The patient was a white man about 30 years old who has suffered from a hardening, thickening and gradual immobility of the skin There had been inflammation, erosion and finally disability This trouble was most marked in the hands and arms and face, although the skin of the whole body was somewhat hide bound, it is hard to pinch the skin, the patient can not close his hands tight There are two forms of this disease, the diffuse form and the local form This is a case of diffuse scleroderma The etiology of the disease is not known and the pathology is very obscure Thyroid extract is sometimes efficacious in this disease and sometimes not In this case the man had been helped very much by it and there were chances that it would stop the progress of the disease, if not cure it He can not elevate his shoulders This is a slow progressive disease and it is very rare, he himself had been in practice twenty years before he saw a case and had seen only six cases altogether

THE PATHOLOGY AND BACTERIOLOGY OF TYPHOID FEVER

Dr Simon Flexner made some remarks on this subject We have every reason to believe that the disease comes from the germ, the bacillus, in the anatomic tract There is no ground for believing that it gets into the body in any other way than through the intestines This fact is based not only on the pathologic anatomy but on experiments as well We can not produce the disease in animals Not all parts of the intestines are alike prone to infection to the same extent Infection takes place where the lymphatic follicles are in aggregation Not all the lymphatic aggregations are affected to the same extent There is a general distribution of these lymphatic follicles throughout the whole tract of the intestines, but not all are affected in typhoid fever The agminated glands are more susceptible to the poison than the solitary ones and those nearer the lower part of the small intestine are especially affected Here the infectious material of typhoid fever is kept a long time owing to the anatomic character of the parts The ulceration produced by the bacilli may be very superficial affecting only the mucous membrane, or the whole thickness of the intestinal coats may be affected causing perforation Many epidemics are from an affected water supply The organism of this disease is not particular as to where it lives and can thrive in water a long time, also in milk It is hard to discover and separate it from the other organisms The growth is often invisible and causes no change in the color or taste of the milk infected, nor does it cause coagulation This fact helps in its recognition because the organisms with which it is confused grow visibly, and recent methods allow the typhoid germ to be discovered in the intestines By the use of the differentiation method of Elsner in culture media of varying acidities the growth of the typhoid organism in plate culture may be easily separated The methods of Pfeiffer and Widal by which the disease is made out in its early stages is very ingenious A bouillon culture of typhoid germs in mixed with blood from a suspected case of typhoid If it is the disease, the effect of the serum from the typhoid case causes a loss of motility, a clinging together and finally a disintegration of the organisms Wyatt H J Johnston has been able to make a diagnosis of typhoid fever in many cases in a short time in a hanging drop of a pure culture of the typhoid organisms to which serum from a typhoid patient has been added This is a great advance in our diagnostic methods and should be made use of by all physicians

Dr Wm Osler spoke of the prevalence of typhoid fever and said there were too many cases in the State of Maryland and in Baltimore He said this prevalence was an index of the sanitary intelligence of the community and of the physicians and with the help of the public and of the politicians it could be stamped out within three years He then called on Dr Fulton, the new Secretary of the State Board of Health to make a few remarks on typhoid fever

Dr John S Fulton said that within his one month of service as Secretary of the State Board of Health he had made one observation and that was that while the country bred bacillus enjoyed great prevalence in the city, the city bred bacillus seems to be especially prevalent in the country As a preliminary step to obtain statistics he had written to fifty six physicians throughout Baltimore and Maryland, and had received twenty three replies, and to explain his opening remark he had found that the city physicians maintained that the cases in their care had originated from infection in the country, while the country physicians blamed the city infection for their cases He said there was also many cases of typhoid fever concealed under the name of typho malarial fever, the majority of persons apparently thinking that this combined form of the disease less serious than either one disease alone To show how unreliable the statistics are he would quote from one of the hospital reports (Bellevue Hospital) which showed sixteen cases of typhoid fever with a mortality of sixteen, and seventy six cases of typho malarial fever with no deaths Either their diagnosis was very bad, or their therapy was murderous He had been studying the health reports of the State of Michigan since 1886 and had noticed that first many cases of typhoid and typho malarial fever were reported, but gradually, year by year the typho malarial cases were disappearing while the malarial and typhoid cases were slightly increasing He said that the State Board of Health of Maryland would shortly make a complete investigation to ascertain the sanitary conditions in reference to typhoid in Maryland and letters would be written to every physician in the State This would be the happiest and most profitable investment Maryland ever made If we could place with the board of experts enough money to make a substantial beginning of the reform they would realize the possibilities that Dr Osler has maintained

Dr Wm B Canfield made some remarks on the

MODERN METHOD OF EXAMINIG URINARY SEDIMENT

He said that, as a rule, the chemic examination of urine was easy, but the examination of the sediment was not so easy unless it was especially abundant When the sediment was scarce or apparently absent, important ingredients may be overlooked The method of allowing the urine to stand in a conical glass has some disadvantages especially in warm weather when decomposition may occur, also casts may remain suspended and often adhere to the sides of the glass and escape observation Moreover, this method of examination involves a waste of time, for this reason he would advocate the more general use of the centrifugal The centrifugal machine has been long known and used, for example in sugar refining and also in many physiologic experiments, but only of late has a smaller and portable machine been made which can be easily used It was surprising to find so little mention in books of the use of this machine in even the most modern text books on urinary analysis and he also thought that, with the exception of the larger hospitals and a very few physicians, the centrifugal was still unknown He then exhibited the machine which he used and demonstrated the method employed

Dr J M T Finney then made some remarks on the "Use of the X Rays in Surgery " Messrs Arnold and Smiles of the Edison Company, first explained the use of the machine and its simplicity as put out by the Edison Company He explained the advantage of it in diagnosing dislocations, fractures or other deformities made visible by it, and suggested that by the use of photographs which could be easily taken in the light without a lens, that the surgeon could keep a complete record with illustrations of every case adaptable to the machine and thus protect himself against malpractice suits In conclusion, Dr Finney related some cases and explained the advantages of the machine from a surgical standpoint After this there was a general discussion of the X Ray machine of various cases which had been brought in by local physicians

Second Day—Wednesday, November 11

Dr Frank Martin read a paper on

CANCER OF THE TONGUE,

in which he described the character of the growth usually present, the epitheliomatous, the age most prevalent, 45 to 68, the length of time it took the growth to develop, six months to three years, and the various operations for its removal He said that the symptoms at first were very undefined with very little pain It usually begins on the side of the tongue and in its interior half and the duration of life without operation had been recorded as one year to eighteen months He spoke of the various operations such as that done with the tracheotomy, with excision of the jaw and with operation through the mouth he found that the operation by excision of the jaw bone gave the most complete results and in his experience the wound healed kindly

Dr John M T Finney said that his experience with the wound left by the excision of the jaw granulated very slowly and gave much trouble He referred to several cases that he had had with the result.

Dr J W Humrichouse of Hagerstown, then read a paper on "Some of the Results of Bacteri[illegible] P[illegible] h,' in which he reviewed what we know up to the present time of the various diseases and their specific organisms with the treatment This paper was discussed by Dr David F Unger of Mercersburg, Pa

Dr **RANDOLPH WINSLOW** then reported two cases of "Gastrostomy for Esophageal Obstruction"

Dr **JOSEPH GICHNER** read a paper on the "Present Status of the Treatment of Tuberculosis," in which he reviewed various methods of treatment of that disease of the present day

Dr **H O REIK** read a paper on "The Practical Use of Skiascopy"

Chicago Ophthalmological and Otological Society

Regular meeting held at the Chicago Athletic Association, Oct 13, 1896

Dr HENRY GRADLE in the Chair

There were twenty five members and guests in attendance Minutes of the April meeting were read and approved

The application of Dr Will Walter of Marquette, Mich, was read and referred to the Committee on Membership

The President then introduced Dr G C SAVAGE of Nashville, Tenn, who addressed the society on

THE ACTION OF THE OBLIQUE MUSCLES IN OBLIQUE ASTIGMATISM

Dr SAVAGE's chief object in addressing the Society was to endeavor to prove the distortion of retinal images by the eye with oblique astigmatism, the address being called forth by the denial of Dr Hotz that such optic distortion took place Dr Savage showed numerous photographs taken with lenses made astigmatic and demonstrated by these a distortion of rectangular figures and of angles Many of the photographs were new and had not been before used by him in any of his numerous articles on this subject Many of the points presented have been embodied in his former communications on the subject but were set forth by him in a new light

Dr F C HOTZ—Honest criticism is certainly the best means for clearing up disputed points in science, and the question of refraction of astigmatic eyes offers a great many mooted points, as we all know The question which Dr Savage has brought up this evening of what he calls distortion of retinal images, which properly we ought to call rotation or displacement of retinal images, is one that requires our serious consideration On a previous occasion I criticised his teachings, and I am glad to know that it has stimulated him to further investigation, and that his recent investigations will also stimulate others, among them myself, to give this matter renewed attention The demonstration which I gave to the Society a little over a year ago was perhaps not as complete or as minute as it ought to have been Perhaps it would have been better to make a cross cut to represent two light lines

I understood Dr Savage to claim at that time that a horizontal line in an eye with oblique astigmatism was displaced or rotated on the horizontal plane by prismatic action I took exception to that You will notice that the doctor now offers a different explanation altogether, which he bases upon the cylindric refraction and not on prismatic action Whether this explanation will hold good or not we shall have to investigate We can not decide by looking at the model presented, as the subject requires a more careful study The photograph shows the obliquity of these images, but whether this is due to actual rotation or to the different refraction magnifying the image of the rectangle in one direction and shortening it in another, is still an unsettled point with me If you look at a right angle through an oblique cylinder its image is magnified in one direction and the right angle appears acute or obtuse, according to the position of the cylinder I stated at the time that Dr Savage's teaching could not be proven—at least, I could not prove it—by clinical demonstrations I took patients with oblique astigmatism and subjected them to the Doctor's test of the double prism before one eye, closing the other eye first, and then opening it while looking at a horizontal line The double prism produces monocular diplopia and when the other eye is then opened, the patient will see a third line between the two I failed with my patients, as well as with myself my assistant and others, by oblique cylinders to see any obliquity of the third line The Doctor in his answer takes me to task and says that was not a proper test, that he would not expect the parallelism of these lines to be disturbed because the oblique muscles were accustomed to action and would hold these lines parallel Now, I expect that the oblique muscles act under the diplopia test, as the straight muscles, the recti, do, and when there is an abnormal action of the recti muscles, as in esophoria for instance, and we produce vertical diplopia, the double images are not seen in a vertical line because the muscular strain is released more or less as soon as binocular vision is abolished I should expect the oblique muscles to do that also, and the Doctor admits that the oblique muscles do relax their abnormal action if binocular vision is suspended, when he speaks of adjusting the axis of a cylinder, for he says one eye being closed, while the other eye is tested The oblique muscles will cease rotating and the eyes will find their natural position If that was not the case I could not understand how the Doctor could ever place the axis of a cylinder correctly in oblique astigmatism I still maintain that this double prism test should show obliquity of the image, if oblique astigmatism produces such obliquity

Another point is this, that the photographs which have been shown are made with a camera and a comparatively high power cylinder In the pictures he first made he used a —3 D cylinder Now, the two convex lenses in cameras have a refractive power of 3 or 3½ D each, and if we add to these a —3 cylinder we produce in the camera an astigmatism which in the human eye would be equal not to 3 D, but to about 30 D, for taking the refraction of the human eye as about 40 D, in the one meridian the refraction would have to be 40 D, and in the other meridian 70 D, to produce the same ratio of difference which we get in the camera by superimposing a —3 D cylinder (4 7) That such an enormous astigmatism should cause marked distortion of images is not surprising To reproduce in the camera the conditions of an astigmatism as high as 3 D we must not use a cylinder of more than ⅓ D I show you here the negative of a rectangular cross taken while a — 50 D cylinder, axis 45 degrees, was held in front of the camera lenses You notice a very slight obliquity of the lines of the cross, the angles are not exactly right angles But the distortion is exceedingly slight as compared with the distortion in Dr Savage's rectangles Now, if a condition equivalent to an astigmatism of 3 D produces so slight distortion only in the less degrees of astigmatism—and this means in the great majority—the disturbance becomes so faint as to be imperceptible

But even admitting the obliquity of the images I should like to ask Dr Savage to explain how binocular vision is to be benefited by the action of the oblique muscles For if they rotate the eyeballs so as to bring the images of horizontal lines upon corresponding meridians of the retina, the same rotation deflects the images of vertical lines farther away from corresponding retinal meridians While this supposed rotation might favor and assist the fusion of images of horizontal objects, it would undoubtedly render absolutely impossible the fusion of images of vertical objects I have therefore not understood what benefit the eyes would derive from this rotation, and therefore still have serious doubts as to its occurrence

Dr W F COLEMAN—In regard to the case reported by me at the April meeting, I took Dr Hotz's suggestion of leaving off the spherical lens and the patient is completely relieved, and I am indebted to the Doctor for this suggestion In regard to the subject under discussion, I think the word displacement is a better one than distortion of the image I have tried the experiment personally and I do not agree with the observations of Dr Hotz If I place before one eye a double prism and look at a horizontal line and place a minus 3 cylinder axis 135 or 140 degrees before the other eye, the middle line is decidedly distorted Some eighteen years ago the subject of oblique astigmatism interested me very much I collected quite a number of cases who took a cylinder at a different angle in reading as compared with the distance I tabulated several cases and wrote it for the *Archives*, but for some reason it was not published A few weeks ago I tested a patient who had 3 D of astigmatism, the best angle for distance was 70 degrees and for reading was at 120 degrees, and the difference in vision for reading was 1 25 Snellen at nine inches with the angle at 70 and 0 5 Snellen at nine inches with the axis at 120, then I first noticed there was rotation on the antero posterior axis by the action of the oblique muscles, and I can not conceive of any other explanation of displacing the meridian from 70 to 135 degrees

Dr HENRY GRADLE—It seems to me that we can scarcely dispute the premises Dr Savage has brought forth this evening, but we are entitled to dispute the conclusions he draws therefrom, at least numerically He exaggerates the importance of the subject In the first place, as Dr Hotz points out, the photographs were taken with cylinders which are of tremendous strength compared with the D strength of the eyeball The eye is about 40 to 50 D if we measure the posterior focus from the second principal point and with a cylinder of 2 or 3, or even 4 D it represents but a small proportion of the refractive power of the eye, while a cylinder of 3 D represents an enormous proportion of the refractive power of the camera lens of four or six inches focus Hence he exaggerated the condition of distortion or displacement in the eye Furthermore, while this distortion must occur to a much less extent than Dr Savage has represented, the fusion could not occur by rotation in one or the other direction, because other vertical or horizontal lines would not fuse on the same plane This discrepancy in the position of the two sets of lines amounts to comparatively little, the effect would be a stereoscopic one, and with fusion of the horizontal lines the vertical lines would incline On the other hand, the eye is undoubtedly capable of a certain degree of rotation in the form of line deviation The apparatus which I devised some years ago showed that moderate deviation of one or both eyes is exceedingly common with and without asthenopia There are few eyes which retain the horizontal and vertical meridians when binocular vision is abolished A moderate rotation of 1 or 2 degrees is common, a rotation of 5 or 10 degrees is not uncommon, and this independent of the existence of asthenopia or interference with the integrity of the entire nervous mechanism of the eye If such is the case we can readily see how a moderate deviation in the rotary direction of the eyes might occur in astigmatic eyes just as well as in eyes not astigmatic, or may occur in regular and horizontal astigmatism, as well as in astigmatism with obliquity

Dr J E Coleburn—I have 1 D oblique in my left, and 2 D in my right, or nearly so, and I am conscious of the change of position when I cover first one and then the other with my glasses I have never stopped to analyze it until I sat here to night I am conscious of a little movement of that kind In noting verticals I would often close my right eye I use my left eye in reading almost always I have always had more or less difficulty in fusing verticals, but in looking at horizontals I am never conscious of the same disturbance, although in looking over some drawings I made years ago before I wore glasses I found I would always be out of my verticals, but never troubled with horizontal lines

Dr Hale—Without wishing to enter into the controversy, I would like to say that but little mention has been made of the possibility of correcting this oblique astigmatism by means of the ciliary muscle We all undoubtedly admit that it is possible for the eye to correct an astigmatic cornea by means of unequal contraction of the ciliary muscle, or some similar process by which the lens becomes more convex in some meridians than in others Why this could not occur as well in oblique astigmatism as in vertical or horizontal astigmatism, has not been made clear to me

Dr Wood—I would like to ask Dr Savage if he has paid any attention to the question of cerebration in these cases of oblique astigmatism and distortion of the images

Dr Savage in reply stated that he believed the term distortion to be better than the term displacement because, as he conceived it, the images were twisted by the obliquely astigmatic eye In answer to Dr Wood, he did not believe that the unconscious cerebration had much to do with the fusion of images, but that the work was done by the action of the oblique muscles

Dr Ware showed an instrument for dividing the capsule in secondary cataract operation It was shaped much like a crochet hook, but the barbed side of the instrument had a cutting edge Dr Ware sometimes used the instrument singly and sometimes used two of them, cutting against each other He had found it of value in many cases of very tough capsule

On motion, a vote of thanks was extended to Dr Savage for his kindness in coming before the Society and expounding his theory of the oblique muscles

On motion, the Society adjourned

C P Pinckard, M D, Secretary

Southern Surgical and Gynecological Association

Abstract of the Proceedings of the Ninth Annual Meeting, held in Nashville, Tenn, Nov 10–12, 1896

(Concluded from page 1105)

THE TREATMENT OF PREGNANCY AND LABOR COMPLICATED BY FIBROID TUMORS OF THE UTERUS

Dr Henry D Fry of Washington, D C, read this paper He advanced two propositions First, that the production of abortion is unjustifiable Second, that labors presenting serious difficulty to delivery are best treated by abdominal section and removal of the child and tumor By maintaining this position the interests of the mother are not relegated to second place While saving the life of many infants, the maternal mortality will also be diminished After making a few brief remarks on the natural history of fibroid tumors complicating the pregnant state and reporting a few cases that had come under his care, he considered the treatment

Dr A J Coley of Alexander City, Ala, reported a case of cyst on the right side with a left uterine tumor, low down, involving the body of the uterus, which was firmly fixed in the pelvis and complicated pregnancy The woman, 40 years of age, suffered so much pain that it was thought advisable to resort to hysterectomy, but it was not insisted on The woman had been married a little over a year She was closely watched and as pregnancy and labor advanced the tumor was pushed above the brim of the pelvis, the woman subsequently delivered naturally of a child, and is now attending to her household affairs Dr Coley counsels against operative interference in many of these cases

Dr R R Kime of Atlanta, encountered a case some two years ago in a debilitated patient with evidences of infection before labor In introducing the hand a tumor was felt in the posterior uterine segment, crowding the cervix apparently above the symphysis pubis, and it looked as if the patient could not be delivered However, by waiting and placing the patient in the exaggerated Sims position and elevating the growth, delivery of the child was affected

Dr Howard A Kelly agreed with the conclusions of the essayist There was a tendency on the part of the profession to interfere too much in cases of pregnancy complicated by fibroid tumors of the uterus He had been called in consultation to see a number of such cases, but the indications were not such in some of them as to warrant the induction of premature labor In many instances a consultation had been the means of postponing operative interference When fibroid tumors complicating pregnancy were situated in the upper part of the uterine body, unless large and multiple, they were comparatively unimportant If situated in the lower part of the uterus and it is found as pregnancy advances they can be pushed up, this should be done in order that labor may proceed naturally On three occasions he had opened the abdomen and had done a myomectomy for tumors complicating pregnancy, the women subsequently going to full term and being delivered normally

Dr W D Haggard, Sr, of Nashville, mentioned a case of uterine fibroid complicating pregnancy, which came under his observation a few years ago Hysterectomy was advised by the consultants but not resorted to The woman was subsequently delivered of a child, and the tumor six months later had entirely disappeared Dr Haggard reported another similar case

Dr James A Goggans of Alexander City, Ala, had observed during the last twenty years a number of cases of pregnancy complicated by uterine tumors He had seen the case referred to by Dr Coley He thinks it is unwise to resort to hysterectomy in a great many cases, believing that the tumors can be pushed up and delivery effected without surgical interference

Dr James McFadden Gaston cited a case of dermoid tumor which complicated pregnancy The obstruction was so great that it was utterly impracticable to undertake to deliver the woman by forceps, and it was concluded to lessen the obstruction by aspirating the tumor This was done, and a little more than one quart of grumous material was drawn off, after which the woman was delivered, with forceps, of a dead child Dr Gaston believes the woman will have to be subjected to a radical operation for the removal of the dermoid before perfect relief is afforded

Dr George A Baxter referred to the danger of postpartum hemorrhage in cases of fibroids complicating pregnancy, and related an interesting case The fibroid tumor interfered with the natural contraction of the uterine fibers, and on this account it was exceedingly difficult to arrest hemorrhage This was a complication which endangered the life of the woman

Dr E S Lewis said it often falls to the lot of physicians to meet with a series of anomalous cases, such as those that had been reported by the essayist, while other physicians with probably quite as large experience would pass through life without meeting some of the complications that had been mentioned During an experience extending over thirty four years he had never met with a fibroid tumor which justified interference before labor, that is, a fibroid occupying the lower segment of the uterus and impinging upon the pelvic cavity Within the past year he had delivered two women having large fibroids In one case when pregnancy supervened, after suspension of menstruation for two months, he was unable for several months to determine the existence of pregnancy The uterus then reached above the umbilicus, but the woman was pregnant and was delivered at full term with forceps, but with no extraordinary difficulty The other woman had an abdominal tumor the size of a six months' fetus Although she had been married a number of years, she was about 40 when she became pregnant The tumor occupied the upper portion of the body of the uterus, but she was delivered without the use of instruments He could conceive that in a case of fibroid situated in the broad ligaments or occupying the lower segment of the uterus, seriously impinging upon the cavity of the uterus, hysterectomy would be inevitable, but it has been his fortune to escape such cases

Dr Fry, in closing, was glad to note that the general trend of the discussion was favorable to conservative work in the treatment of pregnancy complicated by fibroid tumors of the uterus and of permitting women to go full term and trying to deliver them naturally Some of the cases in the paper which he did not read exemplified the wonderful resources of nature in overcoming uterine obstructions Postpartum hemorrhage was one of the serious complications of labor under these circumstances and was common If the placenta was attached to the fibroid tumor hemorrhage was free If it is found necessary to operate, Cæsarean section ought not to be resorted to, as the mortality following such a procedure was fully as high as 84 per cent The best thing to do is to resort to hysterectomy, either the complete or supravaginal method

Second Day—Morning Session

Dr R R Kime of Atlanta read a paper entitled

UTERINE DRAINAGE AS A FACTOR IN THE PREVENTION AND RELIEF OF PELVIC INFLAMMATION,

in which he drew the following conclusions

1 A uterine tampon is not a true drain and even obstructs drainage in many cases

2 Capillary drainage is secured by carrying a strip of gauze up into the uterine cavity, not packing it, and then it drains for a few hours only

3 Gauze can not even act as a capillary drain when either end or center is constricted, or when coated with mucus

4 Gauze when saturated with serum, unless it contains an antiseptic, forms a hotbed for germ development

5 Never tampon the uterus in puerperal septic infection, except to check hemorrhage

6 The good effect of a gauze tampon in cases of endometritis and after abortion is not due to drainage, but to its effects as a tampon, *i e*, checking hemorrhage, stimulating uterine contractions, prolonging medication of the endometrium and acting as a surgical dressing

7 The uterine drainage tube is the most essential factor in the treatment of puerperal infection, and the best method of securing drainage when demanded in other diseased conditions of the uterus

8 It will save more lives, relieve and prevent more pelvic complications, than any other one factor at our command

Dr W E Parker of New Orleans read a paper on

GUNSHOT WOUNDS OF THE ABDOMEN,

and reported thirteen cases with six recoveries In his paper he made the statement that he believed, in the hands of men skilled in abdominal work, 75 per cent of cases of wounds of the small intestine should recover if the cases were seen early, the prognosis being better in this class of cases than in any other He advised an early and rapid operation in all cases

In conclusion he made the following general statements The diagnosis is generally easy, but when in doubt he advised enlarging the wound or probing In doubtful cases he was inclined to attach much importance to pain referred to the umbilicus as a symptom He stated that he had never seen a case where this symptom was not present There is frequently but little shock when grave symptoms are present, and when symptoms of it are present, the trouble is generally hemorrhage and not shock Senn's gas test was not used in any of these cases, and he spoke of it as being unnecessary in at least a majority of cases uncertain in the hands of those not skilled in its use and making it more difficult to replace the intestines after sewing the wounds

As to the technique he said 1 Unless the wound is well to one side, it is best to make a median incision, and it should be long enough to enable the operator to make a thorough examination of the abdominal contents 2 The whole intestinal canal should, as a rule be examined 3 All peritoneal wounds should be sutured with silk Lembert sutures Intestinal wounds should, other things being equal, be sewn in the long axis of the bowel 4 If the liver is wounded better results are obtained from packing than from suturing it 5 If the kidney has been wounded it is best to suture the peritoneal wound and treat the kidney extraperitoneally, if necessary Of course, he did not refer to those where the laceration and hemorrhage are so great that it is necessary to remove the kidney at once 6 Drainage except in late cases, is not necessary if all hemorrhage has been stopped 7 Cases in which the intestines can not be sutured without great risk of obstruction should be resected 8 While enough time should be taken to do the work thoroughly, no time should be wasted 9 Unless the bullet can be felt, search should not be made for it, as it causes unnecessary delay 10 The superficial wound should be closed with silkworm gut or silver wire, and the author believes that a single suture should include the skin, abdominal walls and peritoneum

Prognosis 1 The sooner the patient is operated upon, the better the prognosis 2 Those cases that have been reported in a series including all cases have shown a mortality of about 62 per cent The prognosis is best in cases of wounds of the small intestine, and he believes that 75 per cent of the cases will recover if seen early By early he means in the first two or three hours 3 We all know that alcoholics stand all surgical work badly, and yet most of these patients have been drinking before they come under our care The prognosis in non alcoholics would be better than in alcoholics 4 If the stomach and intestines are empty the prognosis is usually improved by this fact

After treatment While not favoring drugging these patients, strychnin and other stimulants should be given hypodermatically, if necessary Especially should strychnin and alcohol in some form be given to alcoholics Much depends on starting these patients well If restless after the operation or suffering, small doses of morphin should be given If the stomach is quiet and and has not been injured small amounts of water and Ducro's elixir can safely be given at the end of twenty four hours, and small quantities of milk or some light broth can be given If the stomach has been injured, the feeding should be per rectum The diet should be liquid for at least two weeks If there is shock with the clammy sweat that is sometimes seen, atropin, gr 1 60, may be given every three hours as may be necessary When shall we give a purgative? This if one of the most important questions that we will be called upon to decide If we give a purgative too soon, our stitches may pull out, and if we wait, adhesions may form and give us trouble The bowels of these patients will usually act by themselves about the end of the fifth or beginning of the sixth day If they do not, a mild purgative assisted by an enema should be given about the end of the sixth day, or on the morning of the seventh As a rule, these patients should be kept in bed for at least two and a half weeks

DISCUSSION

Dr James McFadden Gaston was not able to corroborate, either from his experience or reading, the favorable percentage of recoveries which the essayist had given in gunshot wounds of the abdomen The fact that the bullet enters the abdominal cavity, if it does not wound the intestinal tract was not necessarily a very serious matter, although wounding of the mesentery with hemorrhage was sufficient reason for exploration As to the Senn gas test for determining perforation of the bowel, it was not used by very many surgeons to day Dr Gaston is very positive in his convictions of the propriety of laparotomy after gunshot wounds of the abdomen, and the sooner the better

Dr N P Dandridge of Cincinnati called attention to the importance of making a distinction between penetrating gun shot wounds and penetrating stab wounds of the abdomen The latter were much less dangerous In fact, a very large proportion of these cases, where it seems as though the intestines must necessarily be wounded, get well without operation In gunshot wounds, however an exploration should be made in every case where there is reasonable supposition that the abdominal cavity has been entered Gunshot wounds were much more serious than stab wounds He could not agree with the essayist as to the percentage of recoveries likely to take place Personally, he had never succeeded in saving a case of gunshot wound of the intestine

Dr A M Cartledge said that Dr Parker's results were the best he had seen mentioned in literature, particularly in penetrating wounds involving the intestines He had operated on five cases of gunshot wounds of the abdomen, three of them hopeless from hemorrhage from the beginning, one dying within an hour and a half from a short operation simply from the enormous amount of blood lost from a wound in the mesenteric vessel He had never saved a case of gunshot wound with intestinal perforation

Dr A V L Brokaw of St Louis considers every case of gunshot wound of the abdomen a law unto itself, and the surgeon has to meet the emergency as it occurs He agrees with the essayist that a quick operation is absolutely necessary

Dr W E B Davis emphasized the importance of early operation, and called attention to the almost hopeless condition that is found if the surgeon operates after twenty four or forty eight hours At the Charleston meeting of the Association, he said, he was criticised for making the statement that at the end of twenty four or forty eight hours usually a general peritonitis would develop after a gunshot wound with intestinal perforation If the surgeon had this condition to contend with an operation would offer scarcely any hope of recovery, unless done very early

Dr B R **Rhett** happened to have had three cases of gun shot wounds of the abdomen during the past year In one case, a little boy, there were several intestinal perforations He was operated on, but died within three hours thereafter Case 2 died eleven hours after the closure of the perforations Case 3 was that of a negro boy who had six perforations, was operated on, the perforations closed, and made a good recovery

Dr H M **Hunter** of Union Springs, Ala , laid stress on the importance of early operative interference He holds that very few patients will recover after twelve hours if not operated on no matter how expert the surgeon may be He had operated on a man thirty six hours after the receipt of the injury who had two perforations of the colon, the ileum being just touched The man died in three or four hours thereafter of general peritonitis

Dr **John D S Davis** does not believe it is possible to obtain 75 per cent of recoveries from early operations in injuries of the small intestine in private practice The cases saved by Dr Parker were operated on two hours after they were shot, hence early operation was the keynote to success While he was not prepared to agree fully with Dr Hunter that none of the cases could be saved after twelve hours, still, the majority of them would die if not operated on within twelve hours The most serious injuries to the belly from gunshot wounds were seldom followed by symptoms There may be several intestinal perforations without the manifestation of any symptoms

Dr F W **McRae** had seen and known of several cases of penetrating wounds in the abdomen, all of which had terminated fatally, with one exception, and this patient was operated on by the late Dr Armstrong, in which there were several perforations A foot and a half of the small intestine was resected and the man recovered The speaker would have some hesitancy in opening the abdomen where there was apt to be some medico legal complication

Dr **Howard A Kelly** offered the following resolution, which was unanimously adopted

Resolved, That it is the sense of all the members of the Southern Surgical and Gynecological Association that in gun shot wounds penetrating the abdominal cavity, the proper routine procedure is to make an immediate exploratory incision

Dr **Parker** said, in closing, that the late Dr Miles in his first series of cases reported thirteen cases the percentage of recovery being nearly 40 per cent He had operated on probably twenty additional cases before his death, and the percentage of recoveries was very much better than in the first series As to the medico legal aspects of this subject, all surgeons should advocate the early opening of the abdomen, and if some fellow practitioner should get into trouble as a result of it, the profession should stand together and support him

Dr L S **McMurtry** of Louisville read a paper entitled

THE EVOLUTION AND PERFECTION OF THE ASEPTIC SURGICAL TECHNIQUE

The author cited cases where surgeons of world wide reputation had infected their patients through some imperfection in the aseptic surgical technique, and said the subject deserves much more study and attention at the hands of operative surgeons than has heretofore been given to it So far as instruments, dressings, etc , are concerned, surgeons had an absolute guarantee against sepsis in sterilization by heat, but when it came to the operative field, the hands of the operator and his assistants, they were reduced to mechanical and chemic methods of asepsis, which were certainly far less efficacious and reliable than sterilization by heat Every thing that comes in contact with the field of operation in the form of instruments and dressings is exposed to heat at a boiling temperature, hence the patient was safe against septic infection, but so much could not be said for the hands of the operator and those of his assistants and the field of operation

Second Day—Afternoon Session

THE PRESIDENT'S ADDRESS

This was delivered by Dr E S Lewis of New Orleans Reference was made to the brilliant achievements of the masters of the art of surgery who had passed away and of the galaxy of shining lights who had followed after who had created an era in the medical history of this century for all future time How can we wonder that the "magnificent records obtained by experts have proved alluring temptations to the inexperienced and ambitious," and led to abuses which have left a blot on the fair page of abdominal surgery? As a representative body of the surgeons and gynecologists of the South, it should condemn the reckless and thoughtless plunging in this delicate and difficult work, without knowledge, fitness or preparation The statistics of the skilled who had learned to minimize risks and cope with difficulties, should not serve as an argument with the inexperienced to secure subjects The responsibility of human life should not be ignored in the craving and struggle for notoriety or fame

With regard to the relative merits of the abdominal and vaginal operations for the removal of the ovaries and tubes, or of the uterus with the appendages, President Lewis said that divergent opinions are entertained and heated discussions have arisen For the vaginal method it is claimed less shock is produced, better drainage is obtained, the abdominal walls are not weakened, and the extirpation of the uterus removes a menacing source of infection and of physical and nervous disturbance For the abdominal operation rapidity of execution is contended, with increased security to adjacent organs and facility of repair when injured, as the structures are always in view The removal of the uterus is also condemned as complicating and unwarrantable unless justified by the state of the organ In the modified vaginal method, as practiced by Doyen and others, the uterus is not necessarily sacrificed, nor a sound ovary and tube It is in touch with the conservative movement of the day, and is in marked contrast with the ultra radical operation of Péan

Dr **Richard Douglas**, of Nashville, read a

MEMORIAL ADDRESS ON DR PAUL F EVE,

in which he said a retrospect of the lives of great men inspired us with the spirit of emulation and indicated to the ambitious mind the paths to fame Prof Paul F Eve had three distinguishing characteristics—energy, consistency of purpose, and extreme modesty, and upon them he built for himself an ever lasting reputation and secured an imperishable place in the temple of fame It is not alone as surgeon and teacher that his reputation rests As a contributor to current medical literature he was a conspicuous authority In military surgery he was without a peer His experience in Poland had engrafted a taste for the work which unfortunately in later years, as one of the chief surgeons of the Confederacy, he had more than ample opportunity to gratify As the result of his observation and work during the war of secession he recorded many valuable facts which the surgeons of to day would do well to ponder As a lithotomist Dr Eve was prominent While his preference was for the bilateral method, yet he was not wedded to it, and appreciated the many advantages of the suprapubic operation and often practiced it, not, however, with the same success that he achieved by perineal section Thoroughness characterized every undertaking of his life When the great and good life of Dr Eve came to an end, suddenly but peacefully on Nov 3, 1877, he had reached more than his three score years and ten, and, dying, left behind him a name that was destined to live on in surgery through many generations

Dr J **McFadden Gaston** of Atlanta, followed with a paper on

THE RELATIONS OF THE TUBERCULAR DIATHESIS TO ITS LOCAL MANIFESTATIONS

He said that in considering the various forms in which tuberculosis shows itself in different structures, there must be an underlying element pervading the whole organism which results from a general deterioration of the secretions Whether there is a predisposition to the development of tuberculosis in certain parts or organs in advance of any constitutional disease or not, this change occurs in connection with the general impairment of the vital forces which characterizes the tubercular diathesis While most recent authorities do not make a distinction between scrofula and tuberculosis, there is a fundamental difference in their general und local development We have different characteristics of tuberculosis when it involves separate organs and structures of the body in a distinctly circumscribed form or is defined as miliary tubercle in different structures, and yet the dyscrasia which marks the lymphatics under the designation of scrofula differs materially from any of the varieties of tuberculosis heretofore recognized Dr Gaston touched briefly on the causes of tuberculosis and reference was made to the papers that were presented before the last meeting of the American Surgical Association on important tubercular lesions The presence of a condition recognized as a tubercular diathesis corresponds in some respects with the cachexia of carcinomatous tumors, and is held by many to be hereditary There has been quite a revolution in [illegible] those best [illegible] ed in the pathology of tuberculosis as to the transmission of this disease from parent to child, and also in regard to the communicability from one individual to another by ordinary contact in social relations It is fair to conclude that great caution should be observed in putting restraints upon the marriage of those suffering with pulmonary consumption, and the association of those laboring under this disease should be limited as far as practicable Finally, the predisposition to tuberculosis can not be relieved by a surgical operation upon the diseased structures, but must be corrected by remedial agencies acting through the absorbent and secretory organs

Second Day—Evening Session

Dr A V L Brokaw, of St Louis, read a paper entitled

THE RATIONAL TREATMENT OF THE DISEASED APPENDIX BY OPERATION

He said the question had been vigorously discussed Is appendicitis a surgical disease at all times, or only surgical at times? He wished to be put on record as favoring the first proposition He was aware that some ultra so called conservative practitioners claimed that the surgeon who advocated the removal of the appendix in every case when diseased, was a dangerous faddist, an extremist suffering from an inoculation of the operativus bacillus He earnestly advocated early operation as soon as the diagnosis was made Always operate when there is even a slight chance of saving a life, regardless of damage to statistics Invariably operation should be insisted upon in the recurrent cases With the knowledge of this dread disease, evolved from the mortuary chambers and the treacherous clinical course in a considerable percentage of cases, why should the rational treatment of all cases be other than by prompt surgery?

Dr James A Goggans of Alexander City, Ala , followed with a

REPORT OF CASES OF APPENDICITIS

From the fact that physicians generally take the stand that operative interference in appendicitis is called for only in exceptional instances where the disease advances to suppuration, gangrene and perforation make the treatment of appendicitis a never ceasing controversy, hence his excuse for reporting a few illustrative cases that had come under his observation, hoping thereby to add what he could to harmonize the difference between the physician and surgeon on this, the most frequent and important intra abdominal lesion in his opinion of the present day The main point at issue between the physician and the surgeon in the treatment of appendicitis depended much on a perfect diagnosis This, too, accounted in a measure for their differences of opinion as to where the medical treatment should end, and when the surgical treatment should begin According to his experience in the management of this affection, there is only one course to pursue, namely, to remove the appendix just as soon as the diagnosis has been made Usually he defers the operation until the bowels have been evacuated by first administering a few small doses of calomel, followed by a saline purge

Dr Joseph Taber Johnson looks upon appendicitis as a surgical disease and believes it should be so treated He deprecates the use of opium and considers it the patient's greatest enemy, in that it masks the symptoms and renders diagnosis exceedingly difficult If opium were not given in some cases a diagnosis could be easily made, surgical interference resorted to and the patient's life saved

Dr James McFadden Gaston spoke of the importance of making a distinction between cases that have foreign bodies in the appendix and those of a catarrhal nature leading to a general inflammatory condition around the caput coli Until we had inflammatory conditions which led to an exudate around the caput coli, it was difficult to definitely determine the exact condition which existed in supposed appendicitis He was becoming more and more impressed with the fact that there were cases of appendicitis that were unattended with perforation, and that these were curable without operative measures An illustrative case was cited

Dr F W McRae does not believe every case of appendicitis is a surgical one from the outset A disease which shows so large a percentage of recoveries was not always an operative one Treves and other English surgeons had shown that 80 per cent of cases of appendicitis got well without operation While demonstrator of anatomy he examined every appendix which came upon the dissecting table, kept an accurate record of each case and about 33⅓ per cent. showed evidences of previous inflammatory trouble around the appendix The individuals most of them convicts, had died of other diseases

Dr Howard A Kelly favored early operation, alluded to the difficulty sometimes of distinguishing appendicitis from tubal and ovarian disease of the right side and related a case in point In a woman with very high temperature and distended belly he opened the abdomen, evacuated a quart of pus, washed out, found a gangrenous tube and ovary as well as a gangrenous appendix The patient recovered nicely from the immediate effects of the operation, but died on the thirtieth day thereafter from abscess of the liver

Dr Charles P Noble said the safest general rule was to operate as soon as a diagnosis of appendicitis was made It was impossible to differentiate the cases which would recover from a primary attack from those that would die

Dr M C McGannon of Nashville recalled one case of appendicitis, a boy, where the temperature rose to 105 degrees. The patient was delirious Upon opening the abdomen the appendix was found to be black but not perforated It was easily removed and the boy made a prompt recovery He believes in many cases that if the physician waits and watches for distinct symptoms before operating the patient will die

Dr A J Coley had met with six cases of appendicitis and made a strong argument in favor of early operative interference

Dr A M Cartledge said the diagnosis was the only problem that practitioners were especially concerned with, together with the proper technique in the execution of the operation The more he operates the more he is inclined to believe we should operate on every operable case as soon as the diagnosis has been made Mistakes were made by waiting and watching for symptoms to manifest themselves Very few, if any, surgeons could tell when an appendix had ruptured

Dr George Ben Johnston said for the sake of statistics operations should be divided into two classes First, those which are performed for recurrent attacks of the disease, and those which are employed for the relief of the severer varieties where perforation has occurred or will take place where there is pus present If the surgeon is to operate upon recurrent cases, it is better for him to do so between the attacks in order that he may choose his time for operation While there were cases of the disease that recovered without treatment, the best results were obtained by surgical interference

Dr N P Danridge finds with increasing experience that he is more and more favorably disposed toward early operation, at the same time, cases present themselves in which he does not advise operative measures He believes that some of the desperately bad cases were and could be saved by operation

Dr R B Rhett said he had operated twenty times for this disease He cited some interesting cases illustrating the importance of early operation

Dr W D Haggard, Jr , called attention to the method of Gerster to prevent contamination of the peritoneal cavity in opening appendicular abscesses that are not adherent to the abdominal wall or are not walled off It consists in introducing thick layers of iodoform gauze through the abdominal incision and packing it between the walls of the abdomen and the abscess sac itself, so that in the subsequent steps of enucleation there is no possibility of soiling the peritoneal cavity

Dr D Ford of Augusta, Ga , spoke in favor of early operation, believing that if cases were not operated on sooner or later, perforation would occur, followed by general peritonitis and death

Dr W E B Davis thought there were few cases of appendicitis that gave rise to general peritonitis in which the surgeon was called and could do any good Frequently the surgeon was called too late Even though the family physician recognizes the condition, it was not an easy matter to persuade the patient to be operated on within the first twenty four hours, and unless these cases were treated surgically within twenty-four or thirty six hours, very few of them could be saved All cases of severe attacks of the disease, in which pain is intense, if seen the first day and consent is obtained, should be operated on In all cases where there is a second attack operative measures should be resorted to

Dr George A Baxter spoke of obliterating appendicitis and asked the essayists to give their opinion of it in their closing remarks

Dr Brokaw replied that obliterating appendicitis was nothing more nor less than the relapsing form of the disease as a rule or what had been termed "growling" appendicitis

Dr Goggans said, in closing, that he could no better present his views on early operation than to say, that if he had the disease or peritonitis supervening upon it, he should demand operation If he was so low that he could not stand a general anesthetic he would take a local one and would ask the surgeon to open his abdomen and remove the appendix

Dr H M Hunter of Union Springs, Ala , reported an interesting case of compound comminuted fracture of the radius and ulna near the wrist joint He had been unable to find a similar case on record in the literature of fractures There were three points with regard to this case 1, that he was unaware of a similar fracture being reported, 2, he had never read nor heard of the method he had described to reduce the fracture of the forearm, 3, he had never seen nor read of such perfect results as were obtained in this case, the wrist having perfect motion, and there is absolutely no interference with supination and pronation

Dr N P Dandridge of Cincinnati reported a case of transperitoneal ligature of the external iliac artery for inguinal aneurysm, in which he removed the aneurysmal sac

In the discussion Dr W E B Davis also reported a case of ligation of the common iliac for aneurysm of the external iliac, which was followed by an excellent result

The following officers were elected

President—Dr George Ben Johnston of Richmond, Va

First Vice President—Dr F W McRae of Atlanta, Ga

Second Vice President—Dr W E Parker of New Orleans, La

Secretary — Dr W E B Davis of Birmingham, Ala

Treasurer—Dr A M Cartledge of Louisville, Ky

Dr E S Lewis of New Orleans was elected a member of the Judicial Council to supply the place of Dr Hunter McGuire, whose term had expired

The Association then adjourned to meet in St Louis, Mo, the second Tuesday in November, 1897

SELECTIONS

A Half Century of Surgery —An unsigned article in the *Boston Evening Transcript*, entitled "One Century of Surgery," is without doubt written or inspired by a medical authority of that city Some of its points are so well and freshly put that we propose to quote at considerable length from it

"The semi centennial of the first surgical operation under anesthesia suggests to the mind the wonderful changes which have taken place in hospital methods during the last century A visitor who should go through the wards of the hospital to day and see the neatly covered beds, the dainty linen, the open, sunny rooms filled with pure air, the attractive nurses in their caps and aprons and the tables laid with the implements for caring for the surgical cases, as if for an entertainment, has but a small conception of the condition of the wards of a great metropolitan hospital in Europe in the latter part of the eighteenth century There are few accounts which present an adequate conception of the mode of conducting a hospital service in those days Some, however, are extant, to give some idea of the condition of such a hospital There is one, for instance, of the Hotel Dieu in Paris Reports show most clearly to what depths of misery the people must have fallen to accept the shelter of this pestilent hospital In it were 2,500 beds, but during the winter season as many as 5,000 patients were in the building at one time This involved the placing of several patients in each bed, and they were frequently arranged in tiers, one above the other, so that some were reached only by means of a ladder There were no means of heating the wards of the hospital and such heat as there was came from the closely packed bodies of the patients The mortality, as may be supposed, was excessive There was one death out of every four patients that entered the hospital, and as that included those that were a little ailing, the insane and the maternity cases, some idea may be obtained of the frightful sanitary condition of the wards Statistics of that period are unfortunately wanting, but it has generally been supposed that, as a rule, those who submitted to an amputation of a limb died of blood poisoning Naturally, under these circumstances, surgical operations were few and far between Nobody was willing to submit to such an ordeal unless absolutely compelled to do so by the necessities of the case During war time, when these hospitals were crowded even beyond the limits which have been described, hospital diseases, as they are called, were frightfully prevalent These included such affections as hospital gangrene, erysipelas, and blood poisoning During the wars of the French Revolution and in the Napoleonic wars, surgical experience in these diseases was enormous Extensive epidemics claimed thousands of victims Nor were they confined entirely to hospitals, for history says that in the latter part of the last century and the beginning of this France and Great Britain were swept by epidemics of erysipelas, and about the middle of this century a most widespread and virulent form of that disease appeared in this country, carrying off thousands of victims in the New England States It also prevailed in New York and Pennsylvania, spreading from village to village

"It not only required a great deal of courage and resolution on the part of a patient to enter one of the great hospitals of France and England during the opening decades of the present century, but the terrible ordeal of the operation itself was alone sufficient to make the stoutest heart quail and the dread of what was to follow made the more intelligent naturally shrink from the risk which they were about to run The Massachusetts General and the Pennsylvania hospitals were the only two large hospitals in this country in 1820 In civil life surgery was limited to 'operations of necessity,' and it was only after much persuasion and intelligent reasoning that the sufferer could be placed in such a state of mind as to be anxious for relief by the knife

"During the first decades of this century improvements in surgery consisted principally in the development of a skilful technique in the handling of surgical instruments and in the dexterity and rapidity with which the operation should be performed The great masters of surgery acquired wonderful skill in these principles and were enabled to this extent to mitigate the sufferings of those who were obliged to undergo surgical operations The art of surgery had reached about this stage at the time when the use of ether was first introduced to relieve pain during surgical operations Previous to the operation at the Massachusetts General Hospital on Oct 16, 1846, surgery had been, as the elder Bigelow said, 'at all times agony' The moment that it had been clearly established that an agent had been discovered which could relieve pain in surgery, the days of anxiety which had visited patients and their medical advisers previous to an operation, were immediately swept away, and the problem of the relief of surgery became vastly simplified Holmes said of this sublime discovery 'The knife is searching for disease, the pulleys are dragging back dislocated limbs, nature herself is working out the primal curse, which doomed the tenderest of her creatures to the sharpest of her trials, but the fierce extremity of suffering has been steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony has been smoothed away forever'

"The result of this great advance was that surgical operations increased in number There was an activity in the operating theater in times of peace that had never before been known Numerous operations were now performed which had never been attempted

'But with great increase in surgical activity came a corresponding increase in the diseases which have been from time immemorial regarded as hospital pests and the inevitable accompaniments of surgical practice It is true that then many operations could be performed in the country in private practice with results equal to those which are seen today The country doctor could tell of triumphs in the healing of the wounds of his patients which the hospital surgeon rarely had an opportunity to observe Among the scientific men who were attempting to solve the problem of bringing about ideal results that were obtained only in exceptional cases, was Sir James Simpson of Edinburgh, with his thoughtful and suggestive papers on hospitalism, and whose name afterward became so famous in connection with chloroform On the breaking out of the civil war the art of hospital construction received a new impetus It was thought that, by improving the atmospheric conditions, hospital epidemics could be more effectually controlled Old buildings, which had served for years, were torn down and new and commodious pavilions took their places During the civil war, however, notwithstanding the perfection to which this system was carried, epidemics raged with all the freedom which they had in the campaigns of France and Russia and in the naval combats of the last century The writer can well remember at this period the epidemic of hospital gangrene in the Massachusetts General Hospital, itself a hospital which even at that time had a world wide reputation for neatness and efficiency and a proper regard for the principles of hygiene So formidable were its ravages that all surgical operations were for some time abandoned The only method that existed at that time for controlling such eruptions of diseases was the system of isolation, as carried out in separate or pavilion wards, or by the removal of patients to tents in the open air

"Anesthesia had already been in existence for twenty years when the first scientific attempts to control the infectious diseases of surgery were made As has already been stated, it was known that under extraordinarily favorable conditions, a large wound might heal by what is called 'first intention', that is, if it had been closed by stitches, its lips became firmly united together without any intervening period of inflammation or suppuration The rule, however, was that, after a few days, inflammation would make its appearance, the edges of the wound would reopen and an extensive discharge of matter would take place

"The wound in such a condition, although it might heal eventually by what is known as granulation, was susceptible to the various hospital diseases. It was to solve this problem that Joseph Lister, in 1867, first published his experiments on the antiseptic treatment of wounds. This event marked the beginning of a second great epoch in the history of surgery. The work which Lister presented to the profession was far from being appreciated at that time and was received with distrust and even with contempt. The man who would claim to heal wounds without suppuration was a visionary. Lister's work at Glasgow was received with much skepticism in London. He was a young and active surgeon at the full tide of life and he realized the great disadvantage under which a surgeon labored, so he was the first to appreciate the work of Pasteur and to make a practical application of his theory in regard to the chemical changes taking place in fluids during the process of putrefaction and applying them to the processes of repair in wounds. Lister's early attempts, looked upon at the present time, may be regarded as crude and imperfect. He succeeded, however, not only in arousing the interest and enthusiasm of the first scientific minds in the profession, but subsequently the principal workers. It is truly said that he did not expect his contemporaries to accept his theories, but he looked for the coming generations to evolve to their final perfection the theories which he had framed.

"So it has proved, and it was not until another twenty years had passed and a new generation of surgeons had grown up to take the place of those who had seen the beginning of antiseptic surgery, that surgery reached the perfection that it has to day. More than one great teacher in former years has proclaimed that surgery had already reached this point. Is it there now? Who can tell what the greater surgery of the future is to be?"

The Intrusive Drug Drummer Abroad.—Under the caption "Samples," the editor of the London *Lancet* makes note of the pushing ways of the pharmacists' commercial travelers of the British Isles as follows:

Trade does not languish in our days for the lack of enterprise; excess of zeal rather than the want of it is its characteristic. That this condition is natural and in a sense even commendable need not be disputed so long as the methods employed are proper and the products for exchange are worthy of their professed reputation. Unfortunately, each of these needful provisions are frequently ignored in certain transactions which possess a commercial interest for the medical profession. The former of them was conspicuously disregarded in a case which was recently settled by a litigation in a county court. The defendant, a medical practitioner, successfully vindicated his action in refusing to pay for goods left with him by the agent of a firm of drug merchants as samples of their manufacture. How such an error came to be committed as to make a demand for payment under the circumstances it is not easy to understand. The second desideratum to which we have alluded—an article deserving of the position claimed for it—is likewise not infrequently absent where novelties in medical treatment are concerned. It is not, therefore, surprising that to most of our fraternity, and especially to those in busy practice, the pharmacist's traveler is not a too welcome visitor. His name is legion, his words not few, and his wares often merely ready made prescriptions not suitable for general use, in fact, ordinary patent remedies. The medical profession, happily, has not yet sunk so low that its members need ask for aid from without in their own special business of prescribing, and they can hardly be expected to exchange for this responsible function the insignificant rôle of the mere promoter of nostrums. Yet this, it would appear, is what is expected of them. What is required in medical practice is not an armament of the phials or the preparations of some particular druggist, but a knowledge and a supply of the most efficient means of treatment, whether of drugs or no, and a competent body of properly trained pharmacists as dispensers.

Eucain in Urological Practice.—The *London Therapeutist*, August, quotes Goerl, of Nuremberg, as favoring the use of eucain hydrochlorid as an aid to cystoscopy. The first case wherein he used this substance was one of vesical tumor. An anesthesia similar to that of cocain was obtained, ample for cystoscopic purposes, but the patient complained of a burning sensation in the bladder, which was still present when the anesthesia had developed and cystoscopy was about to be performed. After the operation there was a severe hemorrhage. As with similar patients the use of cocain did not increase slight hemorrhages existing for years, the above result could only be due to a hyperemic effect of eucain. This corresponds with the observation of Vollert (*Münch. Med. Wochenschrift*, 1896, p. 516) that eucain causes slight hyperemia of the conjunctival and ciliary vessels. "Next time I employed eucain was for anesthetizing the bladder of a patient in whose urine I had found tubercle bacilli, and cystoscopy had been determined upon to discover whether there were vesical complications or simple renal tuberculosis existed. This patient also complained of a burning sensation, although complete anesthesia was effected. The prolonged anesthetic effect of eucain was in this case extremely favorable. Whilst generally more or less severe pain is felt, according to the sensitiveness of the patient, at the first urination after the cystoscope examination, in this case the patient felt no discomfort when he urinated half an hour afterward. In both cases a ½ per cent solution of eucain hydrochlorid was used. Seven or eight cubic centimeters of the same solution injected into the urinary canal sufficed to bring about complete anesthesia. The anesthesia is certainly preceded by a burning sensation that lasts for a half to one minute, but in spite of this slight disadvantage, eucain is always preferable for producing anesthesia in the urinary canal, as it is just with cocain injections into the urinary canal that so many contretemps and even fatal consequences have been experienced. Moreover the extent of the operations usually effected in the urinary canal is generally not sufficient to warrant risking the danger of cocain poisoning. One advantage is also patent to the practitioner, that eucain is unaltered by boiling with spring water, so that sterile solutions can always be prepared extemporaneously and without the addition of any antiseptic. Besides, as far as experience goes, eucain is non poisonous in doses up to thirty grains."

PRACTICAL NOTES

Hydro therapeutics of Tuberculosis.—Winternitz reports 160 cases treated, with 27 per cent improved or relatively cured, and a still larger percentage, 32 per cent., in his latest series of 229 cases. The principle of the treatment is the general toning up of the system by the hydro therapeutics, and the resulting increased power of resistance to the disease. He does not claim for it anything more than this.—*Journal d'Hygiène*, October 29.

Venesection in Nephritis.—Baccelli thinks that the importance of the venous stasis in the early stages of nephritis is not generally realized. It is his practice to relieve the pressure in the vena cava inferior by opening the dorsal vein in the foot and withdrawing 300 grams of blood (adult), repeating the operation if there is reason to believe that the renal stasis still persists.—*Gazzetta d. Osp. e d. Clin.*, October 29.

Effect of Antipyrin on the Kidneys.—To solve the question of the effect of antipyrin on the circulation and the secretions of the kidneys, Cardi and Vallini have been conducting a series of experiments on animals, from which they deduce the conclusions that it acts directly upon the renal blood vessels with a constricting effect, while it increases the general pressure of the blood, but only slightly and transiently. The central nervous system is not included in the vaso constriction. It is accompanied by a diminution in the renal secretions, which is not transient but persists for quite a while.—*Gazzetta degli Osp. e delle Clin.* October 29.

Ozone in Treatment of Tuberculosis.—Labbé and Oudin are much encouraged over the results of their treatment of tuberculosis with inhalations of ozone. In two months there was a constant increase of oxyhemoglobin, increased numbers of red corpuscles, increase in weight, increased respiratory capacity, with rapid improvement of the functional symptoms, cough, etc Out of the total of 38 cases treated, they consider 7 cured in the first degree, 6 in the second, and 16 showed marked improvement, 6 died They add that their patients all lived in unhygienic surroundings, and had no other treatment, and that the winter was long and severe The inhalations were only administered fifteen minutes a day, and they expect much finer results with more comprehensive treatment —*Presse Medicale*, October 24

Treatment of Goitre with Thymus Preparations—The Breslau clinic now has a record of thirty observations, which include Mikulicz's ten cases previously reported No inconveniences were observed from its use All the cases of goitre were submitted to it, even those in which no benefit could have been expected from the thyroid extracts In twenty cases the treatment was successful, the goitre not only diminished perceptibly in size, which was confirmed by exact measurements, but also the subjective disturbances, the difficulty in respiration, etc , disappeared The success was especially striking in two cases in which operative treatment would have been very perilous It is noteworthy also, that in many of the cases previous thyroid treatment had not only failed to relieve, but had produced a distinct change for the worse A complete recovery in an anatomic sense was only realized in two cases The cases successfully treated included persons 49, 52 and 70 years old With the exception of one case in which there was a combination of nodular and diffuse parenchymatous struma, the successes were all attained in cases of pure diffuse hyperplasia The ten unsuccessful cases were five nodular goitre, and five diffuse struma Four of them were under 20 In some cases fresh, chopped thymus from sheep was given, spread on bread, and in others thymus tablets from London (B W & Co), which correspond to 0 3 grams of the fresh substance Both were of equal efficacy The dose of the fresh gland was from 10 grams three times a week, to 30 grams, but the larger doses did not seem to produce any more rapid effect than the usual quantities, 10 to 15 grams —*Centralbl f Chir* October 3

The Dosage of Nitroglycerin—Dr W L Armstrong, *Medical News*, October 31, calls attention to the fact that little has been said in medical literature on the effect of the condition of arterial tension in modifying the physiologic and therapeutic action of nitroglycerin That the continued use of the drug creates a tolerance had been noticed by Hare and others, sometimes very large amounts have been recorded as having been well borne Dr Armstrong carried out in St Luke's Hospital, New York, three series of experiments, the first on six patients with normal hearts and arteries, and found that in these a total dosage of one fifth of a grain in twenty four hours would suffice to produce poisonous symptoms The second experiment was really only the fortunate observation of an accident A patient with well marked atheromatous arteries took by mistake 2½ grains at one dose without any uncomfortable results The rigid arteries, Dr A explains, refused to relax and the poisonous action failed The third series was tried on patients with marked arterial tension, one a case of asthma, the other of nephritis In these the daily dosage was within thirty days gradually carried up to 76 and 125 grains respectively not only without uncomfortable symptoms, but with decided benefit, though this last was obtained before the extreme dose was reached Dr Armstrong offers the following as his deductions from these observations 1 "It is only when dealing with arteries in which there is no more than the normal tonicity of the walls that the drug is liable to produce disagreeable effects Under this condition it should be administered with caution and in small doses " 2 "In cases of arterial tension, the drug can be used more freely than has been customary among practitioners, the dose being proportioned to the degree of tension 3 "In cases of arterial tension, tolerance to the drug is rapidly acquired, and by a slight increase day by day, very large doses can soon be taken with safety, the constant guide being the degree of tension in the arterial wall "

In a subsequent (November 14) issue of the *Medical News*, Dr D D Stewart calls attention to previous reports by himself of a case where 20 grains of nitroglycerin had been taken daily and to the fact that he then remarked on the difficulty of the administration of the drug where extreme arterial tension existed His papers were published in the *Philadelphia Polyclinic* of December 1888, and the *Therapeutic Gazette*, September 1893 He also emphasizes in his note the danger from the use of nitroglycerin from its effect in diminishing the oxygen carrying power of the blood corpuscles, which exists independent of the blood pressure and to which a tolerance can not be acquired This, he holds, is a real peril with much smaller doses than those mentioned, especially with the long continued use of the drug

Treatment of Mammary Tumors—No affection has increased to such an extent in this country as cancer Williams states that the total number of cases in England and Wales in 1840 was 4,500, while in 1895 it was 40,000 Should all tumors of the breast be operated for fear that they may become cancerous, or should they not be disturbed on women of 25 to 30? Cow answers these questions in the *Revue de Thérap Méd chir* No 13, remarking that every mammary tumor is liable to become malignant in a proportion of 10 to 50 in 100 cases Even with a proportion of 1 to 100, he considers an operation indicated But aside from the question of malignity he thinks that there are other and sufficient reasons that justify an operation in every case of tumor, the care and the pains, especially during menstruation, etc A mild operation puts an end to all these disturbances, if the tumor is not diffuse nor malignant He considers a previous microscopic examination injurious, as it may produce a rapid surrounding growth of the tumor, or may open a passage for the introduction of cancer cells leading to further infiltration In actually malignant neoplasms, the pectoral muscle and glands, as also the fat in the axilla, must also be removed He recommends to first open and excavate the axillary cavity, avoiding thus infecting the depths of the opened mammary tissue, and then remove the whole *en bloc* This method diminishes the hemorrhage, as all the vessels that supply the tissue involved are ligated Cachectic cancer patients or patients with generalized cancerous nodules should not be operated upon, except with the strict understanding that it is only a palliative measure, as otherwise surgery is brought into disrepute, and patients with operable tumors are deterred from applying for relief in time When the pain finally compels the patient to seek relief, it is too late —*Cbl f Chir* , October 3

Treatment of Chronic Empyema by Decortication of the Lung—Decortication does not expose to much risk, and yet it offers the patient the inestimable boon of the use of a whole lung Delorme stated at the recent French Congress of Surgery that it has now been done in twenty cases, among them one in America (Ryerson Fowler), others in various countries, and four by himself One case reported from Constantinople was a whirling dervish with a vast pyopneumothorax consecutive to a deep breast wound The lung was easily loosened, when it filled at once the thoracic cavity He left the hospital cured in twenty six days, and his respiration since has been normal even when he performs his violent religious exercises Another case was a child of 11, in a most precarious condition caused by chronic empyema following an attack of pneumonia Several ribs were resected and the lung decorticated, resulting in permanent cure The only means of determining the indications for the operation are to proceed straight to the lung and the membrane, and inspect them *de visu* When the membrane is exposed at one or several points, it can then be deter mined whether it is possible to separate it or not. In the latter case a different operation is indicated, the modified Estlander, but in the former case decortication is performed, and the probabilities are that the loosened lung will expand and fill the cavity. The operation should not be attempted if the lung is found full of small superficial, tuberculous cavities. Delorme believes that decortication is destined to attain an important place in the therapeutics of chronic empyema, which otherwise baffles the surgeon. He considers it superior to thoracoplastic methods, as it surpasses them in its aim, which is to restore the lung to its functions. It is indispensable to disinfect the entire cavity with non toxic antiseptics for several days beforehand. Extensive lavages reduce the chances of infection during the operation to the minimum, and cleanse out the pus which is apt to accumulate in the costodiaphragmatic angle. No special instruments are required, only those usual in costal excisions, with long, strong, steel grooved sounds, a tendon detacher, a spatula to loosen the membrane, a large right hand pair of Bauden's tonsil forceps, and a pair of pedicle forceps to arrest the flow of blood if necessary, ovariotomy forceps for seizing and pulling the membrane, polypus scissors to excise it, a large pair of hemostatic forceps, and curettes of various sizes, one extra large, shaped like a spoon, with a long handle, to clean the walls of the cavity. All these instruments should be long on account of the depth of the lung, and the edges should not be sharp, but almost dull, to avoid injury to the organs. The peculiar delicacy of the operation requires abundant space to work in, and he therefore advocates the thoracic "*volet*" or trap door, instead of the parietal breaches left by the excision of some of the ribs, which do not afford sufficient working room. The location of the *volet* must be determined by preliminary examination with the sound and finger, and if necessary, a part of the rib above the fistula can be resected. This preliminary examination avoids the dangers of wounding an adherent lung. Although the shock has never yet been severe, or more than in an Estlander operation, still it is best to reduce to the minimum the length of the operation and the amount of hemorrhage. The *Bulletin Médical* of Oct. 25, 1896, contains Delorme's additional minute directions how to proceed with the least waste of time and the least danger of injury to the organs. His first announcement was published in the *Gaz. des Hôpitaux*, Jan. 25, 1894.

Silver as an Antiseptic.—The JOURNAL reported June 27, page 1282, Credé's announcement of the value of silver as an antiseptic for wounds. He now confirms his early announcement with a report of his successful experience in 1,900 cases in which he has used it exclusively since he discovered last December that the lactic acid generated by pathogenic microbes forms a lactate in combination with the silver which destroys the microbes. He prefers it to asepsis even in those cases where absolute asepsis is possible, as it is much simpler, shorter, less laborious, less expensive and more certain, while equally favorable results are insured. Less time is required, as the dressings, bandages, aprons, etc., do not need more than a good washing, and only the instruments are boiled. Labor and considerable expense is saved also in the dressings, as they are much smaller and simpler than those required in asepsis. The gentle but effective action of the silver destroys germs that escape asepsis, and are not certainly killed by any other method. Any normally intelligent person can attend to the changing of the dressings, and even inexperienced practitioners can safely undertake the minor surgical operations with it. A really efficient, harmless and practical antiseptic will prove a great relief and boon to the general practitioner who is now in such a state of uncertainty in his surgical cases as nearly to rob him of all confidence. The laity are educated to the fact that suppuration of a wound is not always necessary, and in order to maintain his reputation he often has to send his patient to some institution or surgeon, when he might just as well have treated the case himself at the residence if he had had confidence in his power to guarantee equally good results. Credé states that this confidence is now insured him by the silver treatment which he describes as follows in the *Cbl. f. Chir.* of October 24. Wounds that he makes himself he covers with silver gauze, whether they are left open or closed, merely dusting the needle holes, possibly with itrol (arg. citric.) to prevent any secondary infection. The gauze is made with metallic silver in the form of the finest powder, and is absolutely unirritating. It can be sterilized, but he considers this superfluous, as it becomes antiseptic the instant pathogenic germs develop in the wound by the lactate of silver which forms in combination with their secretions. Other wounds he cleans with water, soap, brush and ether, including the surrounding parts, rinsing off with boiled water. The wound can also be rinsed with sublimate solution, 1 to 2000, or silver solution 1 to 5000. He only removes completely loosened tissue, and only opens up large underminings, otherwise leaving untouched every crevice, fold, etc., and merely dusting with a thin layer of itrol. If there is already an inflammatory process he applies a "wasserpriesznitz," for a few days, but if there is no visible reaction, he merely covers the wound with a little silver gauze, with a layer of cotton outside. If the bandage becomes soaked with the blood and serum he tries to dry it by uncovering the part more often, or else covers it with another layer of cotton, more to improve the appearance than for any other reason. He renews the outer bandage where there is excessive secretion. He is not disturbed at the knowledge that air is in contact with the wound, as he knows that the wound is positively protected from infection. If pathogenic germs had already penetrated into the depths of the wound, at the worst an abscess will develop, which he treats as such. The dressing is not changed if dry, until the fifth to the tenth day. The absence of eczema is notable in comparison with treatment with iodoform, etc. He has never yet observed a case of argyrosis. As itrol (arg. citric.) only dissolves at 1 to 3800, which is a great advantage in the treatment of wounds on account of its prolonged action, he uses tablets of actol (arg. lac.) at 0.2, made like sublimate pastilles and used in the same way. Armed with these and his itrol and silver gauze, the general practitioner is more prepared to meet all emergencies. The silver gauze will keep for years in any climate, without being affected in any way or losing its properties, which promises well for its use in military service. The itrol will also keep an unlimited time in brown or yellow bottles; if it turns brown under the influence of the light, a minimal amount is reduced to metallic silver, which, however, scarcely affects its action.

Credé's silvered catgut and silk threads also keep perfectly. He has described his method of preparing them in his pamphlet on this subject (Leipsic, F. C. W. Vogel) but he offers a sample to all his colleagues with pleasure. His experience with subcutaneous injections of actol in surgical infective diseases is more and more encouraging, but he does not consider himself justified in making any public announcement of this as yet. The dose he administers in erysipelas is between 0.5 and 1.5, and the chief point is not to use a more concentrated solution than 1 to 200, as otherwise the albumin coagulates and produces aseptic necrosis, which prevents the dissemination of the substance throughout the rest of the body, and detracts from its effect. In this respect the technique is still defective. He also states that his observations of the effect of actol in tuberculosis and neoplasms are still crude, although patients treated for a considerable period with the silver salts, applied as a powder to the wounds, or otherwise, present a lively and energetic appearance, like patients who have undergone a protracted course of arsenic treatment. As a gargle and rinsing solution he uses itrol and actol in a 1 to 4-8000 solution, although stronger solutions produce no irritating effect.

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SATURDAY, NOVEMBER 28, 1896

LITHOLAPAXY AND A NEW LITHOTRITE

The fundamental rule of the old lithotrity was that the evil consequences of the operation were in direct proportion to the length of time consumed in instrumental manipulation It was supposed that the bladder was intolerant of all instruments, and the shortest time possible was occupied at a sitting, the smallest instruments used, and the fragments were left to be evacuated naturally In 1878, Prof H J BIGELOW of Boston startled the medical profession, and started a revolution in the surgery of the bladder by proclaiming the error of the lithotritists, and by stating that the bladder was far more tolerant of prolonged manipulation than was previously supposed, and that the temporary presence of smooth instruments in the bladder caused much less irritation than the prolonged lodgement of sharp fragments of a calculus In the pursuance of his ideas BIGELOW formulated a new treatment of stone in the bladder He availed himself of the discovery by OTIS of the dilatability of the urethra, and introduced an entirely new evacuating apparatus, he also used larger and stronger lithotrites than had ever before been employed, and proposed to remove all the calculi at one sitting BIGELOW designated his method litholapaxy, and offered it as a substitute for lithotrity and lithotomy

Despite the opposition and gloomy prophecies of the majority of British surgeons, led by such an eminent authority as SIR HENRY THOMPSON, litholapaxy has steadily grown in favor, and its efficacy has been demonstrated by thorough trial and unquestionable clinical evidence KEEGAN reports that in the Government Hospitals of Punjab and Bombay alone, there were 7,694 litholapaxies performed in four years (1891–4) with a mortality of only 3 45 per cent All ages and all conditions are included in these statistics Convinced by KEEGAN's reports and by his own experience in adults, notwithstanding the fact that he had successfully performed 145 lithotomies in male children without a single death, FREYER resorted to litholapaxy in such cases, and after performing the operation 165 times says “The greater my experience of litholapaxy in male children the more am I fascinated by the operation In most instances the little patient may be seen playing about the day after operation, untroubled by any urinary symptom ’ In all recent statistics the marked disparity between the mortality after cutting operations and after litholapaxy is significant and convincing proof that litholapaxy is a firmly established practice, and that save in very exceptional cases it has completely replaced all forms of lithotomy The small percentage of cutting operations made necessary by such conditions as encysted calculi, enlargement of the prostate, and the coexistence of some vesical neoplasm is well shown by the experience of FREYER, who has possibly advocated litholapaxy more than any other living surgeon He found that of 300 operations for stone only six lithotomies were necessary, litholapaxy being feasible in all the other cases and moreover, he adds, that with his present knowledge, in several cases treated by lithotomy, he would have resorted to the later operation

In the final establishment of litholapaxy as the rational treatment of stone in the bladder, after such persistent and obstinate condemnation of many men of eminent reputation (THOMPSON even denying that BIGELOW had suggested either an innovation or an improvement), we find a double tribute, first, to the superlative merit of BIGELOW's discovery, and second, to the perseverance of such surgeons as KEEGAN and FREYER, who by their courage of conviction, regardless of denunciation justified their belief and definitely proved for all time the advantage of litholapaxy over all other methods

Viewing the present status of litholapaxy it seems that the only room for improvement lies in increased mechanical perfection of the instruments employed Formerly calculi were vaguely called “very hard,’ “hard,” “soft,” etc , but never any exact classification attempted, and the operator was entirely dependent on a guarantee of careful forging in using the lithotrite never knowing when he had exceeded its strength or when it would bend or break, and become worse than useless

In an address before the American Surgical Association, June 1, 1894, Prof WM S FORBES of Philadelphia presented a testing apparatus designed by his son, Mr. JOHN S. FORBES, a mechanical engineer. With this machine he had been enabled to record the exact resistance in pounds offered by each of 184 calculi, indiscriminately gathered, of all sizes from a few grains to 6½ ounces in weight, and of vastly different chemic composition, specific gravity and age. He was also able to measure the crushing power of the lithotrite employed. FORBES prepared an elaborate table of his results, and by combining his anatomic and surgical knowledge with the mechanical skill of his assistant, he constructed a lithotrite which though weighing no more than BIGELOW'S and THOMPSON'S, by meeting the anatomic conditions and conforming to laws of mechanics, eliminates the defects of the older instruments, and is vastly more effective.

FORBES found that the greatest resistance offered by any calculus was 406 pounds. It is but fair to say that this stone was composed of oxalates, and had considerably hardened by many years' exposure on a museum shelf. His lithotrite had broken 184 calculi in the testing apparatus, had been subjected to a pressure of 500 pounds between the jaws on 13 distinct and separate occasions, and after this trying ordeal its ultimate strength was 650 pounds, moreover after this enormous pressure the instrument was closed and could have been introduced and withdrawn from a human bladder with ease, and without injury to the parts.

The value of such experiments is manifestly evident, and the manufacture of a perfect instrument capable of crushing any stone in the bladder is resolved to a simple question of mechanical ingenuity, an element of construction heretofore but indifferently used.

Besides his carefully and impartially conducted experiments, FORBES has demonstrated the fitness of his lithotrite by twenty one operations on the living subject, one of which is reported in another column of this JOURNAL.

Limits of space prevent a description of the FORBES lithotrite, suffice it to say that its greatest advantages are its strength, and the fact that it is tested in the apparatus before leaving the maker's shop, and its exact crushing strength recorded on the handle. Its jaws are so constructed that injury to the bladder, impaction and flying fragments are avoided. There is perfect ease of operation, yet few surgeons will be able to exert sufficient manual force to render the larger sized instruments inoperative. If necessary for experimental work, an exact power-recording mechanism can be adjusted to the screw handle. Mr. FORBES has designed such an attachment. It seems as though with the improved lithotrite that the indications for litholapaxy are increased, and surely the mortality must be still lessened.

Let us have a Department of Public Health!

APHASIA OF THE HAND

The seat of language, or rather of ordinary motor speech, has generally been held to be in BROCA'S convolution or the foot of the third frontal, and the lesion of aphasic disorder of the motor type has been considered as there located, at least in right-handed subjects. The expression of and communication of ideas is, however, not strictly confined to speech, and we have therefore among the different species of aphasia an amimia, or lack of capability of expression by signs, and agraphia or inability to do the same by writing. This last has been called by CHARCOT "aphasia of the hand," a term that has a certain appropriateness, but which lacks the essential element of aphasia in that writing is an indirect and accessory method of the conveyance of ideas, not the important and primary one. The real and only aphasia of the hand properly so called, as Professor GRASSET says in a recent article in *Le Progrès Médical*, is that of the deaf mute who expresses his faculty of language by the fingers instead of the muscles of articulation. The cases of this kind are, as he remarks, very rarely reported in medical literature, and that which he gives has therefore rather more than an ordinary interest and importance.

The patient, an intelligent deaf mute, aged 50, was an arthritic subject who presented all the signs of arterio-sclerosis, and who had had for two years the symptoms of a gradually progressive softening of the brain, without initial *ictus*, due apparently to thrombosis of some branches of the left sylvian artery. There was no symptom of sensory aphasia, the hearing had been congenitally absent, and word blindness was lacking. He read easily and understood what was said to him in the sign alphabet. When requested he would point out words or letters on the page very accurately and readily, there was a certain degree of impairment of the intelligence as compared with what he had been, but enough remained to redeem him from any charge of absolute imbecility or dementia. He understood what he read or what was said to him, but was unable to reply as he had been accustomed to with his right hand, though he managed to do so with his left. He was also unable to write, and this disability was complete.

There was no such paralysis of the right arm or hand as would account for the phenomenon, though there was a certain degree of paresis. Neither this nor the impairment of intelligence sufficed to explain the existing defect, and the center of language by the deaf and dumb alphabet seems from this observation to be, in a measure at least, distinct from the motor center for the ordinary movements of the arm or hand. We have here a congenital deaf mute, intelligent, fairly educated for his condition, capable of understanding and of communicating his ideas with his left hand, but absolutely incapable with his right, which was before his principal organ of language, so to speak The power of writing, which had never been acquired by his left hand, was completely lost, while the ability of making ordinary coördinated movements with his right hand was retained There was no statement as to any facial paralysis, as would have been the case had it existed, the paresis is mentioned as involving only the right arm The question that is so clearly suggested by this is what center for speech was involved in this case Was it the usual one for motor aphasia in the third frontal, or is it situated at the foot of the second frontal or in the adjacent portion of the anterior ascending convolution, the center for the arm and fingers? The fact that agraphia, which existed in this case, is a common result also of lesions of **BROCA**'s center would speak in favor of the existence of the lesion in the usual seat, but of course this is as yet only a matter of conjecture, while the attending brachial paresis might suggest the probability of its occurrence nearer the arm center, in the foot of the second frontal convolution in this particular instance

It is to be reasonably expected that the case will not be lost sight of, and that at some future time this matter will be cleared up by an autopsy As it stands the observation is almost unique as giving an example of a form of aphasia that has been very little noticed by writers on the disorders of speech

THE HOODOOED TEXAS

Old-fashioned sailors have certain cherished beliefs that no amount of argument can dispel The tar who has "sailed the salt seas over," can not be persuaded that it is anything but flying in the face of that Providence, in which with all his impiety he devoutly trusts, to begin a voyage on Friday, and he quotes the legendary history of the ship *Friday*, whose keel was laid on Friday, which was launched on Friday, sailed on Friday, under command of Captain **FRIDAY**, and was, as might have been expected, lost on Friday with all on board Is it consistent to ridicule the old salt's superstition in face of the fact that no young bride in Christendom, nor her doting mother, will deliberately select Friday as her wedding day?

Another of Jack's ineradicable beliefs is that certain vessels are *hoodooed* from the laying of their keels, and have consequently been so imbued with the spirit of evil, that whoever sails in them does so at the risk of his life The unfortunate *Texas*, whose series of mishaps seems to entitle her to this gruesome distinction, might be supposed to have reached the culmination of her woes, short of her downright disappearance at the bottom of the sea, but even the incredulous may conceive that another chapter to her calamitous history is not at all out of the range of possibilities, and that the mere submergence in a mud bath is not a matter to be lightly considered, when that mud is the living pestiferous slime of the Wallabout, the outpour of the huge sewers debouching in the neighboring waters

The broken valve may be replaced, the corroded machinery may be polished anew, the saturated fixtures and clothing may be sent on deck to be dried and every accessible part of her interior may be cleansed and wiped free from moisture, but how about the inaccessible nooks and corners, where the befouled waters have deposited their tiny germs to be awakened into morbific action under favorable conditions of temperature developed by steaming, especially in unhealthy climates? Much has been said about the possible injury to the machinery, but we have seen no reference to the possible detriment to the sanitary condition of the vessel by her unclean bath

It is no simple problem to decide how such a complicated structure as the *Texas* shall be so thoroughly cleansed that there shall remain no hidden nidus for the development of disease germs, and the medical department has the opportunity of conducting on a large scale the experimental methods which have been found effective under restricted conditions The efficacy of sulphurous acid vapor as a disinfecting agent on shipboard has been established, but we are not aware whether formaldehyde has been used in the naval service Superheated steam has, however, been the prime favorite of naval medical officers, but it is to be seen whether it will be possible to permeate a vessel of this character with an atmosphere of dry steam, without such condensation of the vapor on contact with the cold iron sides and bulkheads, as to objectionably add to the moisture, or whether it will not be better to direct, by hand, sprays of live steam through small pipes, against every corner of her interior Every particle of paint will be certainly scaled off, but the operation of repainting will itself be a sanitary measure and the cost a trifle compared with the introduction of disease Without such thorough cleansing there would be great risk of exposure to epidemic influences in the insanitary climate of the West Indies, especially in and about Havana Many of the vessels of the old navy, once stricken with yellow fever, were after years of fancied security, following a winter's freezing at a Northern navy yard, the scenes of fresh outbreaks, until they became notorious as "fever ships," and it is easy to understand how much more apt to happen this will be in the case of these great iron hulks

So the responsibilities of the naval sanitarian increase apace with the development of naval architecture, as in the military operations which are conducted on the grand scale of modern scientific warfare the functions of the medical department become paramount in the conservation of the effectiveness of the personnel—whether it be the intelligent directing officers or the brave, obedient subalterns and privates

Is not this as true in the civil administration of great cities, where masses of human beings are aggregated? Does not progress in the operations of men depend upon the intelligent direction of these operations in sanitary lines by experienced sanitary advisers?

A CENTURY'S ADVANCE IN PEDIATRY

An excellent illustration of the advance in pediatry is afforded by a comparison of the discussion before the Chicago Academy of Medicine (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Vol xxvii, pp 958, 1004) of a single class of neuroses in childhood, with the work of the Swedish pediatrist, ROSEN VON ROSENSTEIN, translated by Dr ANDREW SPARRMAN and published under the title of "The Diseases of Children and Their Remedies" in 1776 There is but one chapter on nervous disorders of childhood in the book, which is entitled "Convulsions and Their Ten Causes" The chapter opens as follows

"The nerves of children are very sensible and irritable They are more numerous in proportion to their bodies than those of a grown person, and as they have many juices or fluids they are so much more softened They are also covered with a very thin membrane, which makes their sensations so much the greater For this reason children are subject to starting, and these, at whatsoever time of life they occur, are called convulsions, but when the whole body is affected and the face at the same time appears bluish, it is then called an epilepsy"

A greater contrast than that with the space devoted in the discussion to a single class of neuroses can not well be imagined

CORRESPONDENCE

Tablet Medication

CHICAGO, Nov 18, 1896

To the Editor —I have read with considerable interest an article appearing in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, issue of October 31, under the above title Our particular attention is drawn to a statement which reads as follows 'A very large proportion of the pharmacopeia is made up of substances which can very readily be made into tablets"

In looking through the list of about 1,000 official products eligible for a medicinal administration, we find between eighty and ninety which are suitable for this mode of administration without suffering loss of therapeutic value by manipulation, and a great portion of this number being powdered drugs, such as blue flag, snake root, buchu, etc , which are seldom, if ever, used in tablet form, being almost always represented by the extract

Possibly if the writer of the article in question had investigated the subject fully he would have said that the pharmacopeia contained many substances listed by the average tablet manufacturer, but, in actual fact, the true substance is not combined in the tablet bearing its label There can be no doubt that a tablet containing acetanilid pure, bismuth subnitrate, charcoal or other similar stable substances should be as efficacious in tablet form, if properly manufactured so as to effect immediate disintegration, as in any other Unfortunately, however, there are but one or two out of the large number of tablet manufacturers who prepare this line of products skillfully, and as a consequence most insoluble salts when compressed are made so hard as to be absolutely valueless therapeutically On the other hand, who would be so foolhardy as to contend that a fluid extract containing sensitive alkaloids or glucosides, having been made by cold percolation and having had the most extreme care bestowed upon every detail of its manufacture could be reduced to a perfectly dry powder almost black in appearance without affecting its medicinal activity?

Take, for instance, such a tablet as we have before us bearing the label of one of our principal tablet manufacturers The formula calls for aloin 1-5 grain, strychnin 1-60 grain, extract belladonna $\frac{1}{8}$ grain Aloin is of a bright yellow color, strychnin sulphate pure white, extract belladonna leaves (properly) a beautiful deep green The tablet before us, however, is something between a chocolate brown and a black, and when moistened makes a brownish black mark on paper Moreover, the tablet weighs less than 1-20 grain more than the actual drug should weigh

There is little doubt that the thoughtful practitioner would prefer administering drugs of this nature in a form that has more promise of result than that above described We believe with our contemporary that a certain class of tablets and tablet triturates could be standardized and adopted by the pharmacopeia, but such a list would properly be very small, compared with the average dispensing counter style of tablet so largely manufactured

If the skill and integrity of all pharmaceutic manufacturers could be absolutely depended upon, all would be well, but unfortunately, such is not the case and our only safety, therefore, would be in confining our patronage to those few houses whose reputation for excellence of product is undoubted and whose integrity and ceaseless endeavor has placed the standard of such preparations where we need feel no anxiety for their fidelity to label WILLIAM L BAUM, M D

103 State Street

Non-payment of Bills

CHICAGO, Nov 19, 1896

To the Editor —As the last of the month approaches I size up accounts and am impressed with the fact that the doctor is the first man called and the last man paid Patients get sick without due financial preparation and consequently the doctor must trust or drop the case, a thing which few doctors are hard hearted enough to do After recovery the patient soon forgets how sick he was, thinks the doctor did not help much anyway, must have charged for visits made to some other party, etc , and feels as though the bill was too big anyway Paying an old doctor's bill seems to him like paying for a dead horse The facts that people usually can not pay at once, and the doctor's kindness, have established the custom of paying doctor's bills whenever the patient gets "a good ready"

I would like space in your valuable paper to suggest that the doctors unite and establish a new custom, that of paying cash, or a promissory note at each visit No more accounts We know that while many patients can not pay cash, very few are unable to sign a promissory note The main advantages of this plan are

1 We would receive cash or the note at the time the work was performed and when the patient feels grateful and willing to pay Cash patients very seldom kick about the size of the fee

2. Immediate cash receipts would be greater because many trust patients would manage to pay cash rather than sign a note

3 People have greater respect for, and make greater efforts to pay a promissory note than an account, although it is for the same work They take pride in their name

4 Patients will pay $2 and take up one of their notes, whereas they would feel ashamed to pay only $2 on an account
5 Patients can not object to the amount of the debt after they have recovered and have forgotten they were ever sick
6 Patients would make greater efforts, first to pay cash, and second, to clear up the debt
7 No bother with bookkeeping

Let this plan be discussed in the various medical journals and societies and proper resolutions passed Have these resolutions published in daily papers as news, and each doctor send a circular to his patients In this way the public would learn what they must do if they call a doctor Then let us stand firm and demand cash or a note at each visit or drop the case People would soon become accustomed to the new order of things and offer cash or a note, without waiting to be asked, as cheerfully and naturally as they now tell us they "have no money, but hope to have some soon "

By this means I believe a custom of paying cash or note C O D could be established that would be beneficial to all kinds of business, but particularly so in ours, because we must do our work at a time when our customers are least able to pay and must be trusted Yours respectfully,

MAURICE F DOTY, M D

The Controversy over the Harvey Medical College of Chicago

CHICAGO, Nov 23, 1896

To the Editor —Some time ago a discussion was started in the medical journals in regard to Harvey Medical College of Chicago In refutation of public statements we simply wish to state a few facts

The Harvey Medical College of Chicago is an evening school, co educational, as regards both pupil and professor It has a graded four year course of nine months each year The instruction is given from 7 to 10 P M Under the present mangement, which has controlled it for the past two years, over 100 students have matriculated, 17 have come up for graduation, and 7 failed to pass the examination The college has graduated only ten students in the past two years Of the ten students who graduated, three have diplomas from the Chicago Dental College with medical attendance of one year at Rush and two years at the Harvey One was from a recognized dental college in Tennessee and attended a medical school in Iowa and spent one year in Harvey Four students spent four years in the Harvey One spent two years at the Detroit Medical College, one year at the Harvey and had two preceptors' certificates One spent his time in a New York medical college and in Rush, with accepted credits from Rush as a senior This student left Rush for financial reasons, entering the Harvey about January and graduating the following June This is the student, no doubt to whom the writer evidently uninformed refers as having graduated in six months from the Harvey and from which he generalizes the statement that Harvey graduates students in six months Does this show a disposition to place the Harvey Medical College in its true light before the public? One member of the Harvey freshmen class entered a prominent day school as a junior while his class mates were still sophomores in the Harvey He is now a senior in the day school while his class mates are still juniors in the Harvey This surely does not show a disposition on the part of Harvey College to rush students through their course to an easy and early graduation One Harvey freshman passed the entrance sophomore examination of the Chicago Medical College with excellent marks, as the Chicago Medical accepts credits from no medical school Harvey College is teaching more than the number of hours required by the Board of Health What about the so called standard medical colleges who teach half a day for six months, *i e* , four hours a day? Harvey College teaches 648 hours a year, minus the customary holidays, while the six months colleges teach 576 hours a year What is the difference between four hours a day for six months and three hours a day for nine months? Is not the difference in favor of the nine months?

Harvey Medical College has some of the finest laboratory equipments of any medical college in Chicago It has forty microscopes and forty individual laboratory desks with plate glass tops prepared especially with reference to bacteriologic work It has a stereopticon lantern worth $300 The laboratory equipments in the Harvey are valued at $3 500 to $4,000 The practical anatomy rooms have all asphalt floors with special drains In the storage room the bodies are embalmed and each laid away on a shelf until needed for dissecting and other purposes

In a conference of medical colleges in regard to entrance examination of students by a State board independent of colleges, the Harvey representative was the only one who unreservedly favored this change It was stated that many students graduate at the Harvey without having witnessed a single capital operation at the college Where is it customary to make capital operations in the colleges before students? Are not such operations generally performed in affiliated hospitals? To my own certain knowledge dozens of capital operations have been performed before the Harvey College classes in hospitals affiliated with the college through the faculty members The fact is that every one of the graduates of the Harvey Medical College saw many capital operations in the Harvey Hospital which was in the former college building

It was also stated that "the facilities of the school are of the most limited kind " This statement is absolutely unfounded in fact The school occupies three floors of a large building expressly arranged for the use of the college, after designs approved by the directors and the building has been named after the Harvey College and is now known as the Harvey Building in all real estate records

Who are the teachers connected with Harvey College that they should be agents of a "diploma mill"? Does Dr Eckley need to be advertised as anatomist? Is Dr Clevenger not known by his writings and teachings? Dr Evans of the P and S taught pathology last year Dr Coulter teaches rhinology, Dr Lucy Waite teaches gynecology and Dr Knapp is in charge of the laboratory In short the faculty consists of a body of fifty reputable men and women, who are giving intelligent and thorough modern medical instruction

In regard to the sensational statement that men and women are induced to leave the "work shop and stock yards, where they slaughter cattle, for the more remunerative occupation of slaughtering mankind," we leave to the good sense of the medical profession Was not Lincoln a rail splitter? Does this age impale men and women for previous condition of servitude? Beside, the time of the day in which a fact is acquired does not alter the value of the fact Respectable and reliable knowledge can be acquired after sundown

The article states that it is the purpose of Harvey Medical College to defeat the Medical Practice Act Do the facts which I have presented go to prove such an assertion? On the other hand I wish to state emphatically that Harvey College has one of the most systematic and detailed four years graded course in Chicago

These facts can be ascertained by anyone with sufficient interest to investigate Searching examination and investigation is invited at the Harvey College Senior students in the Harvey have obligatory day time work During the past two years every senior saw one or more labors In 1896 and 1897 in Harvey Medical College every senior will be obliged to witness at least ten labors In general, what medical school does more for its students? In the light of the above facts, does Harvey College appear to be a ' diploma mill'"?

Who conferred the power of judgment on the writer in the

Western Medical Review hundreds of miles away to announce that there are eighteen medical colleges in Chicago, and of these seven ought to be recognized and no more?

The management of the Harvey College have never considered it necessary to answer unfounded and unreliable public utterances, that its methods of teaching are no secrets, but open to public scrutiny But since I am a teacher of gynecology and abdominal surgery in the Harvey College, I take the opportunity of laying before the innocent the above facts, so that the appearance of evil may not arise

Again, I would request those journals which have entertained the ideas contained in the heretofore published articles in regard to Harvey College, to copy this article in the interest of truth and justice Respectfully,

Byron Robinson, M D

The Physician as a Patient

Tecumseh, Mich , Nov 18, 1896

To the Editor —Why is it, that an error in diagnosis is so frequently made when the patient is a physician? Within the past thirty years, a number of cases have come under the writer's observation, where an error in diagnosis has been made, and where the patient has been a member of the medical guild, it therefore has occurred to the writer, that if the patient had not been a member of the medical profession the mistaken diagnosis would not so frequently have been made

Recently a case illustrating the above statement was reported to the writer, as follows A physician, age about 53 years, had been complaining for a few days with a feeling of general malaise, some fever which increased from day to day, until the patient was taken to bed A neighboring physician was called to attend him, who diagnosed the case as malarial fever complicated with rheumatism As the disease progressed, and the condition of the patient did not improve, a second physician was called in consultation, who appears held similar views to those of the attendant One or two physicians of the town were casually met by the attendant, and invited to see the patient, and "cheer him up," but declined being placed in the position of a layman The condition of the physician becoming critical a third physician from a neighboring town, "eminent" (according to the local press), was called a few hours previous to the death of the patient About twenty four hours after death, a postmortem examination was made upon the body, and the pathologic lesions of typhoid fever presented, consequently the case was immediately reported to the local board of health as death from typhoid fever A recognition of typhoid fever, and treatment accordingly adopted at an early stage of the disease might have produced different results, however it certainly would have been more satisfactory to the attending physician, unless he is so far behind the age as to believe that typhoid fever is frequently dovetailed into malarial fever This and similar cases should lead the physician when called upon to attend a brother physician, to examine him as carefully as an ordinary patient, and never permit the views of the physician patient to bias his judgment in forming a correct diagnosis

Respectfully, J F Jenkins, M D

"Parasite and Host"

Philadelphia, Pa , Nov 18, 1896

To the Editor —In reference to the paragraph in your editorial of November 14 "Parasite and Host," in which you allude to the abuses of the review columns of lay published medical journals, an instance has just come to my knowledge too opposite to be omitted The publishing house of one of our most self righteous and "honorable" journals recently got the author of a book to review the later work of a rival author upon the same subject. Instead of the review appearing after the usual and necessary lapse of time required to weigh and value the work judicially, it came out in the next issue of the journal after the book had dropped from the press, and was made up of snarling, fault-finding bumptiousness, derision and superficial disingenuousness The rival publisher and rival author joined hands and danced in murderous joy over their powerless foes--but what a spectacle of ignominy!

Yours, etc , M

Treatment of Neurasthenia

Key West, Fla , Nov 18, 1896

To the Editor —In your editorial "Physiologic Treatment of Neurasthenia," October 31, you say, "The patient should also be instructed to sleep on his side (this may be accomplished by having him bind a cigar box on the back, or by tying a towel about the waist with the knot behind), etc "

Allow me to suggest a way that I have found more successful and comfortable in several instances Let the patient tie a strip of soft but strong cloth to one side of the bedstead, lie on his left side (for instance) on the other side, extend his right arm to its full length across his body and fasten the right wrist with the free end of the cloth It will be impossible for him to lie on his back, yet have plenty of freedom in other positions Yours truly,

G R Plummer, M D

Information Wanted

Brooklyn, N Y , Nov 21, 1896

To the Editor —Who was the writer of the following lines? Can any of our readers cite for an inquiring friend their place of publication?

"God and the doctor we alike adore,
But only when in trouble, not before
The trouble o'er, both are alike requited,
God is forgotten, and the doctor slighted"

R M W

Location Wanted

Nov 12, 1896

To the Editor —Will you please send me such a list of desirable vacant locations for a physician as you may have at hand, or give me any other information you may have concerning desirable locations I am a graduate of the College of Physicians and Surgeons of Baltimore, and have had some practice at Indianapolis, Ind

Thanking you in advance for any favor you may be able to do me, and assuring you of my desire to return the same at the earliest opportunity, I remain, yours truly, A G S

PUBLIC HEALTH

The Importation of Rags—Dr A H Doty, Health Officer of the Port of New York, has sailed for the Mediterranean ports for the purpose of studying certain sanitary questions The object of the trip is to enable him to thoroughly acquaint himself with all the details regarding the precautions taken in the various Mediterranean ports to prevent the spreading of contagious diseases It is the intention of Dr Doty to attempt to inaugurate a system of baling rags in foreign ports under consular supervision, whereby the United States consular authorities could conscientiously certify to their thorough disinfection The Health Officer expects to be abroad until the middle of January In his absence Deputy Health Officer Sanborn, who has been in the Quarantine service since 1878, will have charge of the entire business of the department

Psittacosis[1] — Several small family epidemics, resembling pneumonia and proving fatal to all of the elderly persons attacked, baffled the Paris physicians, until they discovered that it was a microbian disease contracted from sick parrots

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[1] See also an article in the Journal June 15 1895 page 917

In each case a parrot had been sick and died in the house In one case Mr X bought three parrots, December 30, and sent one to a friend This parrot died in a few days, and the friend and her servant were quite ill for three weeks and only recovered after a tedious convalescence The two parrots kept by Mr X died within a fortnight, and he was taken soon after with chills, fever, vomitings, terrible thirst, insomnia, headache, indications of a pneumonic affection in one lung, tremor, carphology, delirium, coma and death in eleven days The disease presented the picture of a typhoid fever, without abdominal disturbances, but with an excessive predominance of nervous disturbances Mme X also succumbed in a few days, presenting the same symptoms, but with more decided pneumonic complications The son was also attacked, but was only slightly affected, as usual in this disease with the young The microbe was located by Nocard, who described it as a short, thick bacterium, with rounded ends, both aerobic and anaerobic, extremely motile, developing on all the usual neutral or slightly alkalin media It does not take the Gram, nor liquefy gelatin, nor ferment lactose, nor coagulate milk It is extremely virulent, and pathogenic not only for the parrot and man, but for mice, guinea pigs, rabbits and pigeons His report states that keepers of bird stores should be warned against the dangers from sick parrots, and all owners of parrots should be instructed to isolate them when they show evidence of illness It concludes with the remark that "the public should be warned that there is a serious and frequently fatal disease communicated to man by parrots Some persons seem to experience for them a sort of passionate affection, increased by solicitude when they are ailing, and they express this affection by interlingual caresses from mouth to beak If these caresses are not reprehensible from a moral point of view, they are most singularly so from the hygienic "—*Bulletin de l'Acad de Méd* , October 20

Ohio Boards of Health to Regulate Plumbing —Under the caption of "An act to promote the public health, etc ," passed in April, 1896, it is provided that any person, firm or corporation now or that may hereafter be engaged in, or working at the business in the State of Ohio, either as master or employing plumber, or as a journeyman plumber, shall first secure a license therefor, application for which is to be made to the president of the board of health or other officer having jurisdiction in the locality where he intends to engage in or work at such business, and the applicant shall at such time and place as may be designated by the board of examiners to whom his application shall be referred, be examined as to his practical knowledge of plumbing, house drainage and plumbing ventilation In the case of a firm or corporation, the examination and licensing of any one member of such firm, or the manager of such corporation shall be deemed sufficient In every city and each town of 5,000 or more inhabitants, and in each town having a system of water supply or sewerage there shall be a board of examiners, consisting of the president of the board of health, the inspector of buildings of such city or town, if there is one, two master plumbers and one journeyman plumber The president of the board of health and the inspector of buildings shall be members ex officio of the board and serve without compensation The other three members shall be appointed by the board of health, or if there is no board of health, then by the health officer of the city or town, to hold office for one year If in any city or town there is no inspector the board of health is to appoint a fourth member, and in localities where the required number of plumbers can not be secured, such vacancies may be filled by the appointment of reputable physicians This board, if satisfied after examining them of the competency of the applicants, shall so verify to the board of health which issues the licenses good for one year and renewable by any board of jurisdiction The board of health of each such city or town is to appoint one or more inspectors of plumbing to be approved by the city or town council They are to be practical plumbers and hold office until removed by the board of health for cause, which board is to determine their compensation, to be paid out of the city or town treasury These inspectors are to inspect all plumbing work for which permits are granted and report to the board of health all violations of law, ordinance or by law relating to plumbing work and perform any other appropriate duties required by it The board of health of every such city or town is also to prescribe rules and regulations for the construction, alteration and inspection of plumbing and sewerage placed in or in connection with any buildings in such city or town which shall be approved by the council, and no plumbing shall be done except in the case of repairs or leaks, without a permit issued upon such terms as it may prescribe Every violation of any of these provisions is punishable by a fine of from $5 to $50 All money derived from the examination of applicants shall go to the board of health at the place where each was examined Licenses may be revoked for incompetency, dereliction of duty or other sufficient causes after a full and fair hearing by a majority of the examining board, but an appeal may be taken to the State Board of Health

Serum Diagnosis of Typhoid Fever —The Health Department of the City of Chicago has issued the following circular

"Following the action of the Provincial Board of Health of Quebec, by its distinguished bacteriologist, Dr Wyatt Johnston, to whom due acknowledgement is hereby made, the Department of Health desires to call the attention of the medical profession of Chicago to the fact that bacteriologic methods seem likely to afford a rapid and satisfactory means of diagnosis in typhoid fever which will compare not unfavorably in point of efficiency with the methods now so widely employed for the diagnosis of tuberculosis and diphtheria

"It has been shown by Pfeiffer of Berlin and Widal of Paris that the serum obtained from the blood of a typhoid fever patient is capable of so acting upon pure bouillon cultures of typhoid bacilli mixed with it as to abolish the active motion so characteristic of that organism in fluid culture media and to cause an agglutination of the individual bacilli in large groups or clumps This change is easily recognizable under the microscope or in culture tubes and usually occurs within a few minutes

"With serum from the blood of healthy persons or those suffering from febrile diseases other than typhoid, the motion of the bacilli is not arrested but continues indefinitely when mixed with the typhoid culture

"The method as originally introduced by Pfeiffer involved a somewhat difficult and complicated procedure for obtaining pure and sterile serum , but the process has been much simplified by Widal, who found that a few drops of blood collected in a sterilized glass tube suffice for the test

"Widal and Sicard state that the serum and blood, when dried, retain their power of producing this effect, though they do not record any practical application of this circumstance

"It has since been shown by Dr Johnston that the fluid obtained by moistening with water a dried blood drop gives the reaction in a prompt and satisfactory manner even after it has been dried for several days This modification of the process makes it more suitable for a system of free public laboratory diagnosis, similar to that in the case of diphtheria, as a drop of dried blood can be more readily sent to a laboratory and examined there Dr Johnston was able to diagnose correctly by means of dried blood drops sent by mail from Montreal to Buffalo, during the meeting of the American Public Health Association in September, 1896, those which were from typhoid cases and those which were not, using no other means than the method described above

"It is not yet possible to state exactly what degree of accuracy will be obtained from this method when used for the routine diagnosis of typhoid fever on a large scale, but in order to test the practical utility of the method, the Department offers to examine and report (gratis) upon any samples of blood collected by physicians as directed in the instructions given with the outfits A report will be sent by 2 P M upon the day following that upon which the sample is received and will be communicated by telephone when the number is given

"In the Department outfits will be found pieces of sterilized mica upon which the drops of blood are to be dried These are substituted by Dr Gehrmann for the sterilized paper elsewhere used, because the smooth non absorbent surface of the mica facilitates the solution of the dried serum in water Drops of the solution can also be more readily taken up from the mica than from the paper surface These outfits, with full directions for use, may be obtained from any drug store anti toxin station, from the sub laboratory at 43d Street and Cottage Grove Avenue and from the laboratory of the Department, Room 317, City Hall "

Health Report —The following reports of mortality from small pox, yellow fever and cholera have been received in the office of the Marine Hospital Bureau, Treasury Department

SMALLPOX—FOREIGN

Rio de Janeiro, October 3 to 10, 10 cases, 6 deaths
Santiago de Cuba, October 10 to 17, 4 deaths
Japan, October 10 to 19, 202 cases, 57 deaths
Guayaquil, October 2 to 16, 4 deaths
Bombay,October 6 to 13, 1 death
Callao, October 18 to 25, 4 deaths
Gibraltar, October 18 to 25, 1 case
Licata, Italy, October 17 to 24, 5 deaths
London, October 17 to 24, 1 case
Madrid, October 14 to 28, 159 deaths
Nogales, Mexico, November 1 to 7, 5 cases
Odessa, October 17 to 24, 26 cases, 5 deaths
Osaka and Hiogo, Japan, October 3 to 10, 125 cases, 43 deaths
St Petersburg, October 17 to 24, 9 cases, 1 death
Warsaw, October 10 to 17, 5 deaths

CHOLERA

Japan, October 10 to 19, 7,189 cases, 2,106 deaths
Calcutta, September 26 to October 3, 5 deaths
Madras, October 3 to 9, 5 deaths
Osaka and Hiogo, October 3 to 10, 2 cases, 1 death

YELLOW FEVER

Rio de Janeiro, October 3 to 10, 11 cases
Santiago de Cuba, October 10 to 17, 9 deaths
Matanzas, October 27 to November 4, 15 deaths

BOOK NOTICES

Francis Delafield and T Mitchell Prudden, a Hand book of Pathological Anatomy and Histology Fifth edition New York William Wood & Co 1896

The knowledge of pathologic anatomy, giving security to the physician at the bedside, has initiated the development of modern medicine, the progress of the latter is in direct parallelism with this study Where postmortem examinations are scarce the student will not learn the rough pathologic anatomy, and pathologic histology must take the place Such is the matter of fact in this country, this may be also the cause why this hand book, written by two of our best investigators, has more a microscopic feature than that it will be the true and careful leader in the study of rough pathologic anatomy Comprising so much, viz, the whole general pathology, the space for anatomic description seems to have fallen short

The prominent feature of the book is given by the illustrations, mostly from microscopic preparations In this report the authors are quite original, but I doubt if their experience is broad enough, relying more on personal observation than on the study of the literature of other countries

Some references may illustrate this feature On page 441 is treated that serious form of interstitial pneumonia with formation of granulation tissue in the interior of the alveoli The authors have said nothing on the occurrence of those forms being found in Europe mostly in connection with insanity The other forms of interstitial pneumonia identical with the infectious pneumonia of cattle is not mentioned at all It may be heartily acknowledged that the microscopic illustrations are excellently executed

As a very interesting observation, may be noted the tuberculous phlebitis, at page 569 In the amebic colitis (pp 568 and 569) we would have preferred a more schematic illustration instead of the photographic reproduction A case of appendicitis of twelve hours' duration (of the symptoms) is highly interesting, but the lymphatic nodules in the mucosa may find another interpretation

The adenoma of the kidney (p 678) seems to be not rare in this country We think that it is always congenital, not originating in later years as remark the authors The differential diagnosis from adrenal adenoma, originating from dispersed adrenal tissues, is not given, but very simple, as these latter forms are situated always under the capsule as a flat yellow mass The true adenoma originates from the canaliculi of the kidney

We will close these remarks by some critical words on the chronic nephritis, a part worked out especially by Delafield As the author, so far as I know, has worked more as clinicist than as anatomist, he seems not very apt with the manifold features given by the pathologic anatomy of this disease Remarking the important clinical differences that are observed in the scarlet kidney (glomerulo nephritis), the great white kidney (chronic morbus Brightii), the amyloid kidney (often also great white) and the small red kidney without interstitial proliferation, originating only by alteration of the circulation, we would express the hope that the highly estimated author might revise this chapter

Tenth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania for the year 1894 Harrisburg 1895

This volume has come to hand with a note, stating that: "Owing to the destruction of the establishment of the State printer in the early part of 1895, the issue of this volume has been seriously delayed " On page 5 of the report of the Secretary, is a tribute to the late Dr John H Rauch, former secretary and president of the board of health of the State of Illinois, whose work as a sanitarian will ever endure The contents of this volume are varied and interesting It opens with the secretary's report and the minutes, and then is followed by the various reports of the different standing committees on registration and vital statistics, legislation, preventable diseases, water supply, drainage, etc, an account of the inspections, the annual reports of cities, towns, conferences and conventions—the whole forming an admirable book on public hygiene The maps furnished by the State weather service constitute a striking feature of the volume

The Medical Record Visiting List or Physician's Diary for 1897. New York Wm Wood & Co

Some changes have been made in this well known list, and it will, as heretofore, be found one of the most useful

The contents include Various tables and summaries, the calendar, estimation of duration of pregnancy, approximate equivalents, posologic tables, miscellaneous facts, emergencies, composition of various solutions in ordinary use, surgical antisepsis, disinfection and other usual record pages The book is handsomely bound

The Medical News Visiting List, 1897 Philadelphia Lea Brothers & Co 1896

This visiting list contains the usual material of interest to the physician and tabular matter beside the ruled pages for accounts and professional records, such as "signs of dentition," "to find day of confinement," "thermometric scales," weights and measures (both old and metric), examination of urine important incompatibles, artificial respiration, table of eruptive fevers, poisons and antidotes, tables of doses, therapeutic remedies, ligation of arteries

Postmortem Examinations in Medico legal and Ordinary Cases, with special chapters on the legal aspects of postmortems and on certificates of death By J JACKSON CLARKE, M B, F R C S Cl, 16mo, pp 78 London Longmans, Greene & Co 1896

This little manual contains some features that are not included in most works of this kind The author has described rather fully his antiseptic method of making postmortems, by the use of photographers' gloves, and mercury bin iodid solution, which he prefers to the bichlorid solution There is also a special section on the legal aspects of postmortems, and on certificates of death We commend the book

The Physicians' Visiting List (Lindsay & Blakiston's) for 1897 Forty sixth year of its publication Philadelphia P Blakiston, Son & Co

This "old reliable" list contains an accurate posologic table, thermometric tables, a chapter on asphyxia and apnea, with convenient pages for records The fact of so many years' service shows that the book has been greatly appreciated by the profession

NECROLOGY

Harry A Hodgen, M D —The profession of St Louis and the many friends of Dr Harry Hodgen were shocked to learn of his sudden death in the month of September It was known that he had not been in the best of health for some time, but so sudden a termination had not been anticipated In the prime of life, just when the greatest measure of success was in sight, he was removed from the field of his work Words are futile to express the personal sorrow over his untimely taking off, and the sincere sympathy of the writer with the loved ones left behind It has been the pleasure of the writer to know him as boy and man since he was a little tot in short dresses, and no one knows better the many strong qualities of head and heart possessed by him He never sought to make a favorable impression, but was satisfied to trust to the keen discernment of the worthy for proper appreciation At an unusually large meeting of the medical profession of St Louis, held in the hall of the St Louis Medical Society, to take proper action, the following report of a special committee appointed by the president to present an expression of the society on the death of Dr Hodgen, was made and ordered published

Mr Chairman and Fellows of the St Louis Medical Society—Dr Harry Hodgen was the firstborn of the late Dr John T Hodgen, one of America's greatest surgeons, and by inheritance and association was well equipped for the making of a physician The fact that his father died before he graduated in medicine was a great calamity to him, and yet it did not prevent him from applying himself earnestly and honestly to his chosen life work He inherited ability from his father, especially along the lines of surgery, and, very happily, chose the department of orthopedics The profession at large, and his many patients pay tribute to his skill in this specialty He was earnest, industrious and faithful as a physician, as the head of a family and as a citizen Ill health had been his constant companion for many years and yet he never complained, nor did he deviate from the straight line of earnest, honest work His desire to achieve a place in his profession and to properly serve his family, to which he was almost fanatically devoted, prompted him to deny himself the rest and vacation from time to time, which he should have had during many years past He kept in the harness, hard at work, almost to the last Physical exhaustion finally drove him to rest, which was soon followed by his sudden death The medical profession of St Louis will never possess a member with a keener sense of professional honor and duty, and one who more unselfishly and heroically, although a sufferer, served humanity without regard to his own interests than Dr Harry Hodgen I N Love, John P Bryson, Paul Y Tupper, Committee —*The Medical Mirror*

W W Wellington, M D , of Cambridgeport, Mass , October 27 He was born in West Cambridge, now Arlington, in 1814, and was the son of a noted teacher, who gave him an early education At the age of 18 he was graduated from Harvard College and taught school for a period of two years, at which time he entered the Harvard Medical College, graduating in 1838. He then began the practice of medicine in Cambridge and has since practiced in that city He was a member of the Cambridge School Board for forty years He was also coroner for Middlesex County for ten years He was a member of the Massachusetts Medical Society, an honorary member of the Boston Obstetrical Society, associate member of the Boston Medical Improvement Society and the Cambridge Medical Improvement Society The degree of A M was conferred upon him by Harvard College in 1871

John Russell McClurg, M D , of West Chester, Pa , November 3 He was a graduate of Jefferson College and he and Dr Gross of Philadelphia were close friends In 1864 he was commissioned major and surgeon, United States Volunteers and in this position he remained until the close of the war when he retired with the rank of brevet colonel United States Volunteers He gave valuable services while in charge of several prominent hospitals and soon was quoted as a skilled surgeon, which reputation he sustained up to his death In 1864 he received from Governor Brough of Ohio, in testimony of his services a handsome sword, and on the occasion of its being given to him the late President Garfield, then chief of General Rosecrans' staff, made the presentation speech It was while in charge of Jefferson Barracks at St Louis that this pleasant episode in his life took place Returning to Chester County in 1865 he resumed his former practice, and his continuous term in that line covered nearly fifty one years He was the father of the West Chester Philosophical Society and other kindred organizations, and during the past quarter of a century his labors in the fields of science, literature and philosophy were extensive and eminently successful

Joseph C Thomas, M D , of Cincinnati, Ohio, November 18, aged 56 ——Henry C Chapin, M D , of Lincoln, Neb , November 1, aged 81 ——John T Langan, M D , of Oswego, N Y , November 5, aged 40 He was born in Lowell, Mass , and was graduated from the University of Vermont and the Bellevue Hospital ——D R Pelton, M D , of Topeka, Kan , November 4 ——Oscar D Cheney, M D , of Haverhill, Mass , October 29, aged 55 He was born in Plaistow, N H and educated at New London (N H) Academy and Dartmouth College, and was graduated from Harvard Medical School He was a member of the Massachusetts Medical Society and had been in practice in Haverhill twenty five years ——L P Knoll, M D , of Montrose, Pa , October 20 He was struck by a locomotive ——Richard Beebe, M D , of Alford, Mass October 20, aged 72 ——Levi H Thompson, M D , of Reading Pa , October 23, aged 73 He was graduated from Jefferson Medical College in 1853 ——Henry H Hollembaek, M D , of Burlington, Vt , November 5 He was graduated from Jefferson Medical College

ASSOCIATION NEWS

Appointments —President Nicholas Senn has made the following appointments

Committee on Entertainment of the Members of the British Medical Association who will attend the next meeting at Montreal—The following members of the American Medical Association

A L Gihon, M D , U S N
J W S Gouley, M D , New York
S C Busey, M D , Washington
H H Didama M D , Syracuse
Levi C Lane, M D , San Francisco
Henry D Holton, Brattleboro, Vt
E D Ferguson, M D , Troy, N Y
C N Hewitt, M D , Red Wing, Minn
I N Love, M D , St Louis
William Pepper, M D , Philadelphia
W H Pancoast, M D , Philadelphia
William Osler, M D Baltimore
Donald Maclean, M D , Detroit
J T Whittaker, M D , Cincinnati
R Matas, M D , New Orleans

To deliver the annual address in State Medicine *vice* Jerome Cochran, M D , deceased, John B Hamilton M D

SOCIETY NEWS

North Western Ohio Medical Association —The fifty second meeting of this Association will be held at Defiance, Ohio, Thursday and Friday, December 10 and 11 The following are the officers President Charles Graefe, Sandusky , vice presidents, Charles E Slocum, Defiance, W S Phillips, Columbus secretary, J P Baker, Findlay , assistant secretary and treasurer, T M Gehrett, Deshler There are twenty five papers on the program and an in [illegible] ced

The American Laryngological, Rhinological and Otological Society — The Western Section of this Society will hold its meeting in Kansas City, Mo , Feb 2 and 3, 1897 Titles of papers to be read before this meeting should be sent to the Chairman, Dr Jas E Logan, 1208 Wyandotte Street, Kansas City, Mo , before January 15 It is also requested that those who desire to join this society shall send in their names

The North Central Illinois Medical Association —The twenty third annual meeting of this Association will be held in Streator, Ill , Dec 1 and 2, 1896 Following are the officers President, Thomas N Cunningham, Princeton , first vice president, J Frank Keefer, Sterling , second vice president, J S Whitmire, Metamora , secretary and treasurer, Wm O Ensign, Rutland There are about twenty papers on the program

Twelfth International Medical Congress —An important committee has been formed at St Petersburg to receive and entertain visiting physicians during the Congress, consisting of the surgeons general of the army and navy, the directors of various scientific institutions, hospitals, etc , with the Professors Ott, Pawlow, Petersen, Sklifassowski, Tarenezki, Paschutin and Turner The section of dermatology and syphilography give informally the following subjects as the preference of those in charge The formal announcement will follow later Actinomycosis, primary cutaneous tuberculosis, cutaneous sarcomatosis, acanthosis nigricans, pathogenesis of area Celsi, gonorrheal eruptions, malarial eruptions, mercurial eruptions, treatment of scleroderma, treatment of rhinoscleroma When should the treatment of syphilis commence , how long should it continue , should the accidents be treated as they appear or should the treatment be provisory? Modifications of the figured elements in the blood of syphilitics during the condylomatous period Treatment of syphilis with soluble and insoluble mercurial injections

MISCELLANY

Losing Flesh —The long, gloomy, operating room of the hospital is hushed and still , soft-voiced nurses move quickly about , a skilful attendant arranges the cruel looking instruments Before administering chloroform to the patient, prior to the amputation, the kindly doctor asks him if he has any message for his friends "Naw !" he murmurs wearily , "jest tell 'em dat you saw me, an' dat I'm losin' flesh "

Some Recent Bequests —Professor Krassnig, M D , of Klagenfurt has bequeathed 150,000 florins to found a children's hospital there It is also announced from Tomsk, that a certain W Simin has presented the University of Tomsk with 100,000 roubles to establish a bacteriologic institute on condition that the inhabitants of the city of Irkutsk shall always be supplied free with the remedies prepared in it Mrs Corrigan of Chicago has given $9,000 to St Joseph's Hospital

The Small Boy and the Mustard Plaster —The small boy had been requested to do some errands, but insisted that he was feeling badly As the family physician happened to call he felt the boy's pulse and looked at his tongue and said "You had better make a good strong mustard plaster " The boy looked depressed and left the room "When shall I apply the plaster?" asked the mother "Don't apply it at all He'll get well before that stage of the treatment is reached "

Increased Intensity of the Roentgen Ray —Buka has succeeded in producing the ray with such intensity that the objects to be photographed can now be stationed quite a distance away from the tube, which allows a much better perspective He discovered the extreme intensity of the ray by finding that it had penetrated into his zinc box under the heavy table on which the patients recline to be photographed, and had imprinted the zinc handle of the box on six sensitive plates contained in it, one beneath the other

Diet is the Man —Basing his remarks on the famous and untranslatable pun of the philosopher, Feuerbach, "Der Mensch ist was er isst" (man is what he eats), a Swiss physician has something to say regarding the favorite dishes of famous men In a certain sense, he says, the words of Feuerbach are true There is no doubt that the food eaten has great influence on the temperament of mankind, and that, on the other hand, a man shows certain characteristics in choosing certain kinds of food When John the Baptist nourished himself with locusts and wild honey, it was just as much in keeping with his character as the preference of Zoroaster for bread, cresses and water

Hirsch vs Nordau —Dr Nordau has startled the reading world by his cry of "Degeneration" , Dr Hirsch opposes his conclusions by demonstrating the difference between "Genius" and "Degeneration," and analyzing the social, literary and artistic manifestations of the day dispassionately and with a wealth of suggestive illustrations In a brilliant explanation of the psychology of genius he shows that Lombroso and Nordau make no distinction between scientific genius based upon hard work and artistic genius , nor between genius and talent He points to Goethe as an example of a perfectly developed genius He answers specifically Nordau's claim that this is an age of hysteric disorder, and after an extended, brilliant and informing discusion of art and insanity, in which he shows himself a confirmed Wagnerian, he summarizes his conclusions by absolutely declining to accept Nordau's point of view —*Literary Bulletin*

Not Proper Proceeding for Release of Lunatic —Whatever may be a person's remedy to obtain release from illegal confinement as a lunatic, the supreme court of Pennsylvania says, in re Rust, decided Oct 5, 1896, it is clearly not a proceeding under a statute intended, through a jury of six and a commissioner, to confine him, and so it affirms a decree dismissing a petition for an inquisition under the Pennsylvania act of 1836, one of the objects of which is to provide guardianship for the person of the lunatic, and its principal purpose is to protect his estate It should also be noticed that the court declares in this case that it could not for a moment entertain the doctrine that in a great city like Philadelphia, with its numerous hospitals for the detention and cure of the insane, to which annually many unfortunate patients are removed from other States, that the courts are powerless to interfere, because the judicial proceedings resulting in the confinement were had in another State The writ of habeas corpus, it suggests, is a writ of right intended to protect the individual against illegal confinement at the time it issues, without regard to the legality of the confinement at its beginning

Retained His Homestead Rights —A physician purchased thirty seven acres of farming and pasture land, which he resided on and used for a home from 1869 until the year 1879, when, in order to more conveniently locate himself to practice his profession, he bought a lot in a small village one quarter of a mile from his home, and lived on it until 1892, when he in turn sold that village property and rented a house in another village for two years, meanwhile either renting out the farming portion of his land every year, or having it cultivated by hired labor, but always retaining for his own use the pasture, and then finally went back to live on that property, with his sister, who composed his family, at the end Believing that the evidence established that it was not his intention to abandon his homestead rights in that property, but that he always intended to move back to it in the future, if he should not be successful in the practice of medicine, the court of civil appeals of Texas holds, Farmer v Hale, after a rehearing Oct 10, 1896, that there was, under the circumstances, no abandonment of the homestead, and on that ground it perpetuates an injunction restraining a sale of the property on execution, levied in 1894.

The new Bender Laboratory at Albany, New York —On October 27, the formal dedication of this workshop of science took place, being the outcome of a gift to that city by Matthew W Bender, Esq The board of trustees, of which Drs Vander veer, Hun and Gorham are members, took the keys Dr Abram Jacobs of New York, delivered an address on the rise and progress of laboratory research in sanitary science The institution has been designated the Bender Hygienic Laboratory It is thoroughly equipped with the most recent apparatus for the study of pathology and bacteriology, and every facility is furnished for acquiring a thorough knowledge of these important subjects For physicians and scientific men this laboratory will be of inestimable value for the examination of sputum and pathologic specimens The laboratory is in charge of Dr George Blumer, late assistant in pathology and bacteriology in Johns Hopkins University The building stands in a beautiful little park on Lake Avenue in the western part of the city, near the famous Dudley observatory The structure, which is of fine red brick, is from an architectural stand point plain, but it has a dignified and, so to speak, scholarly appearance Inside the building everything is most perfect and complete for the purpose for which it is designed, the study of germ diseases

Curious Superstition Concerning the Alder —Dr Robert Fletcher contributes to the *Bulletin of the Johns Hopkins Hospital*, August, an exhaustive historic compilation on the pharmacology of witches, quoting "Macbeth," Middleton's "Witch," Ben Jonson's "Masque of Queens" and many other old plays and verses Of the elder tree, he says, there are many odd superstitions connected with it The "fox headed Judas," as an old writer termed him, alluding to the color of his hair, was believed to have hanged himself upon an elder tree, and that entirely credible writer, Sir John Mandeville, declares that he saw the veritable tree while in the Holy Land There is a curious bit of folklore relating to the elder, well known no doubt to the witches, who rode on broomsticks in their night journeys Coles, in his "Art of Simpling," 1656, says "It hath been credibly reported to me from several hands, that if a man take an elder stick, and cut it on both sides, so that he preserve the joynt, and put it in his pocket when he rides a journey, he shall never gall " Richard Fleckno in his "Diarium" 1658, also tells us

"How alder stick in pocket carried
By horseman who on highway feared [fared]
His breech should nere be gall'd or wearied,
Although he rid on trotting horse,
Or cow, or cowl staff, which was worse
It had, he said, such virtuous force,
Whose vertue oft from Judas came,
(Who hanged himself upon the same,
For which in sooth, he was to blame)
Or't had some other magic force
To harden breech, or soften horse,
I leave't to th' learned to discourse "

In *The Athenian Oracle*, once edited by Samuel Wesley, brother of the famous John Wesley, is a confirmatory story, "A friend of mine," says the relater, "being lately upon the road ahorseback, was extremely incommoded by loss of leather, which coming to the knowledge of one of his fellow travellers, he over persuaded him to put two elder sticks into his pocket, which not only eased him of his pain, but secured the remaining portion of posteriours not yet excoriated, throughout the rest of the journey " It is much to be desired that this very valuable information should be made known to the members of the hunt and to young cavalrymen going into the field

Medico-Literary Notes

THE THIRTEENTH EDITION of Ringer's Handbook of Therapeutics is now in course of revision and will soon be published by Lewis & Co

GOULD'S DICTIONARY OF MEDICINE is the only reference book of that description that is commended to medical students in the "Students' Number" of the London *Lancet* for 1896

MR EDWARD ATKINSON of Boston says that "Child Life Insurance" may more appropriately be termed "Child Death Insurance "

THE PUBLISHING HOUSE of Cromwell & Company, New York, are about to issue "Famous American Doctors," by C E L Wingate

IT IS REPORTED that a lady has presented the French Academy with 800,000 francs, the interest of which is to go to any one who will discover a cure for consumption

DOCTOR—"Now, what did your father and mother die of?" Applicant—"Well, sir, I can't say as I do 'zactly remember, but 'twarn't nothin' serious "—*Punch*

BOSTON is to have a magnificent new hospital in a few years, to cost $3,800,000 It is the gift of Peter Brigham, who died twenty years ago, and it will be for the indigent only

THE SEVENTY SIXTH BIRTHDAY of Dr Rudolf Virchow was duly celebrated on Tuesday, October 13 Many telegrams of congratulations were received from the four quarters of the globe

SURGEON MAJOR HUESTON of the British army, professor in the medical school at Tientsin, has been made a mandarin and received the decoration of the Order of the Double Dragon from the Emperor of China

DR LUSK'S work on midwifery is to be translated under a governmental direction into Arabic for the use of the school of medicine at Cairo, and for the female pupils of the school of midwives

IN NINETEENTH CENTURY, September, Dr Percy Frankland argues in favor of having all milk boiled that is used in household consumption Of all the articles of food, he holds milk is the one that affords the most congenial nidus for the bacteria of infectious disease

THE LIBRARY of the late Dr Thomas Addis Emmet, with his letters, pictures, etc , has been estimated to be worth $240,000 It has been purchased, however, in its entirety for the great Union Library, over which Dr Billings now presides, for the sum of $150,000

LARDOWSKY proposes the use of the new word "opotherapy" as a substitute for serotherapy and serum therapy These latter two words have had currency for some time, but the purists object to them as having a hybrid derivation Opotherapy is shorter

ST BASIL THE GREAT has the credit of establishing for modern clinic medicine its first hospital He quotes with favor the saying of Hesiod, "The perfect man is he who of himself knows what is right The good man is he who gains that knowledge from others, while the third man, who can do neither, is really good for nothing "

MONSIGNOR G H DOANE, D D , of Newark, writes to the Boston *Medical and Surgical Journal* about the time when he was a medical student and witnessed the harrowing scenes of the pre anesthetic period This eminent and reverend prelate confesses that his interest in surgery and medicine continue unabated

THE HARVEIAN ORATION at the Royal College of Physicians was this year delivered by Dr Joseph Frank Payne, Censor of the College, and the working editor of that laborious compilation of the College, "The Nomenclature of Disease," the last edition of which has recently been received and was noticed in the JOURNAL

IT IS NOT generally known that "Yankee Doodle," the so called "national air" of the United States, had for its composer a member of the medical profession Dr Richard Schuckburg has the credit of writing it He was a medical officer in General Amherst's army at the time of the French and Indian war in 1755

ABDURRAHMAN KHAN, Ameer of Afghanistan, has introduced vaccination into his country, by the advice of his English physician Two calf lymph stations have been established and a proclamation has been issued from Cabul calling on the people to bring in their children to be vaccinated before next spring

A COUPLE OF TEETH found near Weimar, are claimed by Dr A Nehring to be the oldest human teeth yet found in Europe One of them, a permanent first molar, is remarkably like that of a chimpanzee, but much like that of the gorilla or orang He also calls attention to the fact that the first premolar and last molar are reduced in size in modern man as compared with early man This was known before, but he adds that he finds the same state of things in domesticated, as compared with wild dogs In the former, as in civilized man, the jaw is relatively feebly developed and there is a tendency to reduction of the last molar

The Journal of Nervous and Mental Disease —The management announces the following arrangement of the staff for 1897 Editors Dr Chas L Dana, Dr F X Dercum, Dr Philip Coombs Knapp, Dr Chas K Mills, Dr Jas J Putnam Dr B Sachs, Dr M Allen Starr Associate editors Dr Philip Meirowitz, Dr Wm G Spiller Managing Editor Dr Chas Henry Brown, 25 West 45th St, New York to whom address all editorial and business communications

The Edinburgh Medical Journal will have a new publisher and a new editor and Edinburgh will, on Jan 1, 1897, have a new monthly journal, the *Scottish Medical and Surgical Journal*, with Dr William Russell as editor The old editor of the older journal is one of the board of medical directors of the new journal The profession will have absolute control of the latter, and all profits will go to the betterment of the journal

The late Prof Moritz Schiff of Geneva, died October 6, after a varied but most honorable career The Italian press, lay as well as professional, teems with biographical detail regarding the late Professor Schiff, whose noble services to the country's medical schools are all the more remembered from his having been driven from his Florentine chair by an anti vivisectionist agitation, largely fomented by "zoophilists" and homeopathists His first wife, according to one biographer, was a Rothschild, who made it a condition of his sharing her fortune and faring sumptuously every day, that he would absolutely renounce his experiments on living animals For a month after marriage he tried to accept the situation, but could stand it no longer and at the end of that time he had accepted the simpler life, with the return to the laboratory

Index to the Semaine Medicale —The *Semaine Médicale* announces that it is preparing an index of its files for the last fifteen years, which will be the most complete ever attempted The name of every person mentioned in it will be found in alphabetical order, with details and date of the work or discussion in connection with which it is mentioned Every organ, disease, treatment, etc, will also be indexed, as also its normal and pathologic anatomy, pathology and therapeutics, and for the diseases, the etiology, symptomatology, diagnosis and treatment Even for those who do not possess back numbers of the magazine it promises a complete résumé of all that has been accomplished in the medical sciences during these last important years It will not be ready for a year yet and it is to be sold by subscription for ten francs, until April After it is placed on the market the price will be fifteen francs

Cincinnati

The mortality report for the week shows deaths from zymotic diseases 12, phthisis 9, other constitutional 9, local 63, developmental 2, violence 6, under 5 years 25, total 101, annual rate per 1,000, 15, preceding week 99, corresponding week in 1895, 98, 1894, 103, 1893, 134

Out of about 700 practicing physicians of Cleveland 40 have failed to register, and affidavits have been prepared by the county prosecutor with a view of causing their arrest

The Association of the Surgeons of the Cincinnati, Jackson and Mackinaw Railway have decided to hold their next meeting in Cincinnati Dr G I Cullen has charge of the arrangements

An epidemic of diphtheria prevails at Saville, Ohio

A case of tetanus was treated at the City Hospital last week successfully by the antitoxin serum injections

The case at the Cincinnati Hospital reported in the Journal last week in which the patient was unable to tell his name or home, although otherwise apparently well, died after two weeks' confinement in the hospital A postmortem revealed an abscess in the cerebellum

The Cincinnati hospitals are now considering the feasibility of sending all cases of malignant disease considered incurable to the Branch Hospital In future a committee of three members of the staff will be selected to purchase the books and periodicals for the library, instead of it being left to the librarian as formerly

In the case of Young against Dr J L Cleveland for damages for malpractice in the treatment of a fracture of the femur, the court gave a verdict for the defendant

Dr H J Stephens of London, Ohio, recently sued a woman for $1,181 for medical services rendered, in response to which she claimed that as a result of the treatment received she had contracted the opium habit and was damaged to the extent of $3,000 The Doctor lost his case and the defendant was given $15 damages

The Kentucky court of appeals have affirmed the decision of the circuit court sentencing the dental student, Scott Jackson, to hang for the murder of Pearl Bryan

Dr F Forchheimer is experimenting with subcutaneous vaccination at the City Hospital, the object being to avoid the sore arms The virus is injected with a hypodermic syringe The first experiment was made on November 20, and the result is being watched with considerable interest

Dr J H Leatherman of Columbus was found guilty last week in the Columbus police court of violating the Mosgrove registration law Sentence was suspended pending appeal to the circuit court, to which the case will be taken as a test case

A physician of this city was found guilty of misuse of the mails and fined $100 and costs by Judge Toft of the United States court last week The violation of the postal laws consisted of sending a dunning postal card to a delinquent patient

A case of buphthalmus was operated on last week at the Losanti Hospital The eye was enucleated

Hospitals

The Olivet Day Nursery of Chicago, under the patronage of Dr Julia Holmes Smith, Mrs M B Carse, Mrs L G Perce, Mrs B Hancock and Mrs A D Wheeler, was organized in October, 1893, for the purpose of helping women who were obliged to leave their homes every day to go to work With the other day nurseries of Chicago it is proving one of the most efficient and practical ways of helping those who desire to work The nursery is situated at 281 Clybourn Avenue

THE PUBLIC SERVICE

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Nov 14 to Nov 20 1896

Major Louis S Tesson, Surgeon (Ft Ethan Allen, Vt) is granted leave of absence for four months, to take effect about Dec 5 1896

The following named recently appointed Asst Surgeons will report in person to the president of the Army Medical School Washington D C for the course of instruction First Lieut Louis Percy Smith *First Lieut Marshall Morgan Cloud*

Major John D Hall Surgeon, is relieved from duty at Madison Bks, N Y and ordered to Ft Wadsworth, N Y, for duty, relieving Major Edward J Comegys, Surgeon Major Comegys, on being thus relieved is ordered to Ft Sill, Oklahoma Ter for duty

RETIREMENT

Major John V Lauderdale, Surgeon, retired from active service Nov 13 1896

Change of Address

Butterfield F A, from City Hospital to 713 Ashland Av, Rockford Ill
Bowers, C E, from Anthony Kan to 1009 Russell Av, St Louis, Mo
Carnes, U M from Cleveland to Box 284 Canton Ohio
Coffman G L, from Thayer Kan, to 1654 California Av St Louis
Gallaher Thos J from 1177 Clayton Av to 1321 Race St Denver Colo
Harvey, D S, from 227 92d St to Davis Bldg, 92d and Commercial Av Chicago
Mavwit L, from Chicago to 101st Pl and Vincennes Road, Washington Heights, Ill
Maughmer, G C, from Waupecong to Kokomo Ind
Standish Myles new address 6 St James Av Boston, Mass
West, C B from Rome to 1723 S Salina St East Onondago, N Y

LETTERS RECEIVED

American Journal Pub Co St Louis Mo Andrews B J Burlington Vt Alta Pharmacal Co, St Louis, Mo American Medico Surgical Bulletin New York N Y

Bluhm Geo J Chicago Battle Creek Sanitarium Battle Creek, Mich Brown F F, Advertising Agency, New York Brown, Charles Henry New York

Canfield Wm B, Baltimore, Md Corr, A C, Carlinville, Ill Cook, W H Comanche Iowa

Gilmore J A Thomasville Ala

Hedden, J W South McAlester I T Hektoen L, Chicago Hummel A L Advertising Agency, New York

Jenks, E P New York

Kime R R Atlanta, Ga Kelley Maus & Co Chicago

Ludwig Henry C New York Laughlin Mfg Co Detroit, Mich

Mohr Chas A Mobile Ala McFarland, George C, Jacksonville, Ill

Nixon, J W Soldier, Kan

Open Court Pub Co Chicago

Pick, Dr A W, Hyannis Mass Powell, N A Toronto, Canada Penniman D B, Argyle Minn Purdy Charles W, Chicago, Parkinson James H Sacramento Cal

Ruck Karl von Asheville N C Reber, W W, Leighton Pa Reed R Harvey, Columbus, Ohio Reeves, B E, La Mar, N C Rice Geo H, Sandoval Ill

Stoll John J Chicago Shields W Bayard St Francis Ark

Todd, W J Mt Washington Md Tweedale C B Cheboygan, Mich Tinker, K, Athens, Ohio Tower B M, Conneaut Ohio

The Journal of the
American Medical Association

VoL XXVII CHICAGO, ILL, DECEMBER 5, 1896 No 23

ADDRESS

RECENT EXPERIENCE OF SURGERY OF THE KIDNEY

President's Address before the Twenty second Annual Meeting of the Mississippi Valley Medical Association at St Paul, Sept 15 1896

BY H O WALKER, M D
PRESIDENT OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION
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The paucity of literature upon renal surgery has prompted me to report three cases in which four operations were performed, representing nearly all the operative procedures that are now done upon the kidney

Case 1 Sacculated kidney with suppuration and nephro lithiasis, nephro lithotomy and subsequent nephrectomy —Aug 4, 1896, J R, age 29 years, was referred to me by Dr E M Houghton for operation, with a history as follows When 6 or 7 years of age he remembers having experienced severe pain in the region of the left kidney, which lasted for a day or two These attacks occurred afterward at intervals of from one to three months, at one time he had none for nearly a year He did not experience any disturbance of the bladder until he was about 12 or 14 years of age This combination of pain in the region of the kidney and the bladder continued, with increasing severity, until three months ago, when it was constant He has observed a sediment in the urine for nearly fifteen years, but at no time did he observe any calcareous deposit Dr Houghton, from frequent examinations of the urine, found pus in quantity, blood at times, but no casts, and from the character of the symptoms diagnosed a cystic kidney with calculi The patient presented a marked emaciation, pulse 100, temperature 99 6 Percussion revealed well marked dullness on the left side, extending from beneath the ribs to the brim of the pelvis and nearly to the medium line By two days' observation I was convinced that Dr Houghton was correct in the diagnosis I had, however, suspicion of trouble in the right kidney Therefore the character of the operation must be in accordance with that suspicion

Aug 6, 1896, I performed the operation by making an incision just below the twelfth rib, anteriorly, obliquely downward to the crest of the ilium (free exposure is necessary in any operation upon the kidney, therefore the necessity of a long incision) After thorough division of the structures down to the renal space and with pressure by the hand of an assistant in front, I stripped the fatty capsule off from the kidney in front with my fingers, giving a large exposure of its surface Palpation and inspection revealed a large, irregular, fluctuating tumor, through the walls of which the calculi could be readily felt Before incising the kidney I fastened the capsule to the lower opening of the wound with several catgut sutures to prevent the contents of the kidney escaping into the torn and divided tissues A large quantity of pus and urine, probably two pints, flowed from the incision made into the kidney There were several communicating cavities, from which I removed large calculi, somewhat embedded in the walls I could readily feel the ureteral orifice with my fingers, but was unable to pass anything through it to the bladder After thorough irrigation and introduction of rubber drainage the wound was closed by interrupted silkworm gut sutures The after treatment consisted in irrigation twice daily The discharge of pus and urine was considerable in quantity He passed 17 ounces of urine per urethram the next day, aside from that through the drainage tubes

The recovery following the operation was uneventful and the temperature never rose above 100 degrees and the pulse was from 80 to 100, the amount of urine increasing to 28 ounces daily Although there was undoubtedly a certain amount of urine excreted by the left kidney, as was evidenced from the soaking of the dressings, that little escaped into the bladder was due to "the bending or oblique insertion of a non-stenosed ureter," as described by Dr Christian Fenger (*Annals of Surgery*, page 637, 1895)

The circumstances of the patient would not permit the long-continued treatment necessary to follow out Fenger's "conservative operative treatment of sacculated kidney" I was also doubtful if there was much functionating power of the kidney left It was therefore decided to do a nephrectomy, which was performed Aug 29, 1896 I first inverted, by incision and suturing, the fistulous opening to prevent the escape of septic material The incision was in the same line as before Careful dissection liberated the entire kidney and the vessels and ureter were ligated separately There was but little hemorrhage The wound cavity was packed with a long strip of gauze and the edges approximated, as in the first operation An analysis of urine on the day before the operation showed pus specific gravity 1022, acid The daily quantity was 26 to 28 ounces and the condition of the patient about the same as when I first saw him On the following day the amount of urine passed was 18 ounces, this gradually increased until September 12, it was from 30 to 40 ounces The wound has nearly healed, appetite good, and he walks about the halls of the hospital There is still some pus in the urine but this is gradually disappearing The following is the report of the microscopist "Microscopic examination shows an abscess wall from which inflammation products are infiltrating surrounding tissues The parenchyma of remaining portion of kidney shows chronic change which leaves very little, if any, of glandular portion of the kidney functional The glomeruli are either contracted or have disappeared The microscopic examination does not reveal cause of changes seen, but they are probably brought about by causes which produce abscess"

Case 2 Tubercular kidney, nephrotomy and nuclein treatment —Mrs P H, age 28, came to me Aug 9, 1896 While teaching school four years ago, she first noticed pain in her right side below the waist, she shortly afterward developed a leucorrhea The pain in the right side gradually increased and was exaggerated on lifting or walking Soon after the appearance of the leucorrhea a cystitis developed, which has been present ever since She informed me that urination is very frequent, every half hour to two hours, and that the urine contains a large amount of deposit Inspection of the abdomen revealed a large indurated, immovable mass which she has noticed for several months gradually increasing in size It extends from below the ribs to the crest of the ilium on the right side and is extremely painful upon manipulation She was very much emaciated, complexion sallow and her pulse was 110 and temperature 102.5

My diagnosis was disease of the right kidney, probably tubercular, and I advised further observation before deciding as to the character of the ope Sh red the Hospital, Aug 10 1896 pic tions of her urine did not bac contained large quantities of pus and broken down kidney epithelium Cystoscopy and catheterization of ureters showed discharge of pus from both, and although we did not find bacilli tuberculosis, I still believe that the patient was suffering from tubercular kidney, as she did not improve, I advised a nephrotomy, which was done Aug 16, 1896, as I did not think a nephrectomy would be practicable, first from the fact that both kidneys were affected, second, that in these advanced cases adhesions are so extensive that in all probability death would be the result On dividing the tissues down to the kidney I found it firmly bound by adhesions When the kidney was incised pus escaped in considerable quantity, together with broken down kidney substance, which macroscopically, had all the appearance of a tubercular deposit and afterward proved to be so It is not always possible to determine specifically the true character of secretions and excretions from important organs even by careful microscopic examinations I removed as much of the cheesy material as was possible with the curette The hemorrhage, which was profuse, was controlled by packing the cavity with gauze

From such a history and condition the ultimate result must be necessarily fatal by any operative procedure that might be instituted I therefore prescribed the nuclein treatment with which I have had very satisfactory results in surgical tuberculosis, especially of the genito-urinary organs Little could be expected in so forlorn a case, she, however, began to improve in a few days, had a better color, improved appetite, and entire subsidence of bladder symptoms, retaining urine nearly all night She left the hospital September 9, with the wound still open and discharging The result in this case is uncertain

Case 3 Movable kidney, fixation by modified operation — Miss A Z, age 23, was referred to me, at St Mary's Hospital, August 25, 1896, by Dr A H Steinbrecher of Detroit for operation

Since leaving her native country, Russia, three years ago she has been an invalid Chronic constipation, flatulence, indigestion, supra orbital neuralgia, were the prominent symptoms, together with distress and pain in the right hypochondriac and lumbar regions This latter symptom, for the last eleven months, has been more distressing when she was in an upright position compelling her to remain in bed most of the time A tumor, freely movable, was discovered in the right lower hypochondriac region, and toward the median line No difficulty was experienced in displacing from and replacing it in the normal position of the kidney The urine was found to be normal My experience in fixation of movable kidney has been extensive but not always with the most satisfactory results, by the usual methods advocated The operation that I employed in this case, although original personally, I find in looking up the literature on the subject that others have resorted to a similar method I operated August 26, 1896 The patient was placed in the semi prone position and the space between the ribs and the ilium made prominent by a sand bag The incision was made in a similar manner as in the previous case and the kidney freely exposed, permitting thorough inspection and palpation, drawing it well out through the opening, which was easily done on account of the existence of a long pedicle Not discovering anything abnormal either of the kidney or the upper end of the ureter it was placed in its proper position and the capsule divided for a distance of three inches on its convexity longitudinally, using care not to wound the cortical substance The capsule was then separated from the kidney, for a distance of half to one inch, entirely around the cut, and the cut edges were fastened to the fascia and muscles, by interrupted catgut sutures, so that when the suturing was complete, there was a solidity of fixation never equaled in any other method that I have used

It will be observed that I did not, as others have recommended, introduce a suture through the deep substance of the kidney for the purpose of holding it in position while the suturing of the capsule was being done This is unnecessary if it has been freely liberated from its bed The deep suture very easily cuts its way through the substance of the kidney even though gentle traction only is made by the assistant This cutting is often followed by almost intractable hemorrhage and leaves a damaged kidney

The wound was united by deep silkworm gut sutures, excepting at its lower end, which was left open, and the cavity packed with a long strip of gauze, in order to favor slow cicatrization and a firm attachment of the kidney It is a question, however, whether a complete closure at once would not result as satisfactorily as though the wound was left to heal by slow granulation This solution will be better ascertained by further experience

This patient, August 12, is still in the hospital with the wound nearly healed and will be kept in bed until after the expiration of four weeks, when she will be permittted to get up, as by that time, it is reasonable to suppose that the adhesions will be firm enough to hold the kidney in place

The frequent occurrence of movable kidneys, about one in every five or six women, makes the subject one of importance and much depends on the surgeon to relieve the distressing symptoms that are liable to occur Limited displacement is quite as apt to cause suffering as those more extensive, for it has been frequently noticed that a kidney with a long pedicle produces symptoms that are but trifling The simplicity of the method just described commends itself both as to safety and a greater possibility of permanent satisfactory results The various methods of transfixion of the kidney with ligature are uncertain as to results and to a greater or less extent dangerous as regards its future function

In making a choice of a route to reach the kidney, it seems to me, there should be no hesitancy in selecting the anterior, in preferance to the lumbar route The only reason would be the making of a nephrotomy for the purpose of drainage of an abscess of the kidney Lumbar nephrotomy is much more difficult and dangerous than by the anterior route In doing an nephrotomy for relief of a kidney, with multiple abscess, by the lumbar route, it would often be found necessary to do a nephrectomy as it is frequently impossible to empty all the abscess cavities without making a T incision The danger from the hemorrhage is necessarily limited by full exposure of the kidney and there is less susceptibility of sepsis from a kidney where free dissection is made, than by the tearing and pulling by the lumbar route

In conclusion, I am inclined to the following opinions

1 That the most practical route to the kidney is anteriorly

2 The selection of the lumbar route is largely by precedent and unnecessary timidity on the part of the surgeon

3 A nephrectomy for tubercular kidney is not always practicable

4 Fixation of a movable kidney by stitching its reflected capsule to the muscles is much to be preferred to that of transfixion and anchorage by stout ligatures

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ORIGINAL ARTICLES

IMPROVED TRACHELORRHAPHY

Read by title in the Section of Obstetrics and Diseases of Women, at the Annual Meeting of the American Medical Association held at Atlanta, Ga May 5-8, 1896

BY AUGUSTIN H GOELET, M D
PROFESSOR OF GYNECOLOGY IN THE NEW YORK SCHOOL OF CLINICAL MEDICINE ETC

The benefit afforded by properly performed trachelorrhaphy in appropriate cases is very generally admitted and though 'the operation may be applied unnecessarily by some and may be performed incorrectly by others, upon the whole it has perhaps been productive of more good than any other operation in gynecologic surgery The difficulty in those cases which do not yield satisfactory results lies usually in not removing a sufficient amount of the diseased tissue of the cervix, or in removing too much on the outer or vaginal margin and not enough on the inner margin or that next the canal, thus leaving a wedge of tissue which prevents proper coaptation of the flaps and puts too much strain on the sutures This is partly because the denudation is done with scissors, which can seldom be made to cut through such dense tissue where it is desired to cut They invariably slip, and considerable trimming is necessary afterward to get the flaps in proper condition for the application of the sutures This consumes a great deal of time and is a serious disadvantage, as well as the fact that the scissors will frequently cut where it is not desired to cut and too much or too little tissue is removed

Another serious objection to the ordinary trachelorrhaphy is the great difficulty of inserting the sutures, because of the density of the tissue and the awkward position, for the operator, of the parts to be united I venture to assert that any operator would rather do an abdominal section than one of these tedious and fatiguing cervix operations It is therefore, because I believe I have simplified the operation and made it quicker and easier, that I have been encouraged to describe the method which I have employed with so much satisfaction

In the first place, the denudation is done with a knife especially designed for the purpose, which consists of a short two edged blade set at an abtuse angle to the shaft and handle (see Fig 1) I am well aware that several knives have been designed for this purpose before, but so far as I know none have been made upon the principle of this one, and they have not proven satisfactory else they would have been more used These knives are made in two sizes so as to be useful in all cases, since the cervix in some instances is thick and the flaps deep, and in other thin by compassion The method of using the knife is to seize one angle of the laceration with a tenaculum and transfix it with the knife, which is then drawn forward, making a clean cut and denuding the flap out to the lower margin of the cervix with one stroke It is then inserted again on the other side and the opposite flap denuded in the same manner If now the tissue which is to be removed remains attached at the angle, a reverse movement of the knife severs it with its other cutting edge Besides the greater ease of denuding with the knife, there is another advantage, namely, it can be inserted and held in such manner as to avoid leaving a wedge of tissue on the inner edge of the denuded surface

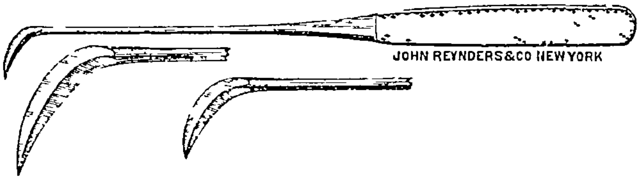


FIGURE 1

In the next place, a special needle is employed for inserting the sutures I have abandoned the straight needles and the needles with slight bend near the point, and use a nearly half-curved, round needle, much smaller in diameter than the needles usually employed in this operation, with a flattened spear point These needles can be inserted into the hardest cervix with the greatest ease I have never yet broken one of these needles and find that they can be inserted with very much less force than any other needles which I have used

Next I use for suture material either silver wire or silkworm gut which has been especially prepared so as to render it pliable and easily tied I do not think catgut, silk, or any other suture which is not impervious should be used in plastic work upon the cervix The silkworm gut is prepared in this manner Each strand is carefully wiped off with a pledget of gauze or cotton saturated with ether, and a number of strands are put into a glass tube of suitable length, the ends being stoppered with corks The tube is then filled with a 2 per cent solution of lysol, one end is left uncorked, and it is placed in a sterilizer with the uncorked end above the level of the water and it is boiled for half an hour The lysol solution makes the silkworm gut very pliable, so it can be tied as easily as catgut, and in addition it renders it thoroughly aseptic

The operation is further facilitated by placing the patient in the lithotomy position

Technique of the operation —It is of the greatest importance that the patient be carefully prepared for the operation For two weeks every second day a tampon of prepared wool soaked in glycerin is placed against the cervix to deplete and soften it This is removed after twenty-four hours and a copious douche of hot water is projected against the cervix and vaginal vault by means of a syringe giving an interrupted flow At each sitting for the introduction of the glycerin tampon any cysts of the Nabothian glands detected on the cervix are punctured and emptied

Two days previous to the operation the patient is given a calomel and soda purge and she is placed upon a restricted diet The morning of the operation she is given a saline cathartic, the vulva is shaved and washed in a 1 per cent solution of lysol and she is given a vaginal douche of lysol solution also

When anesthetized, she is placed upon the operating-table in the lithotomy position, and the vagina is thoroughly scrubbed with a 1 per cent solution of lysol and afterward irrigated with a solution of bichlorid, 1 to 2,000 A speculum is then inserted and a ligature is passed through each lip of the cervix and tied with a long loop, which is held by an assistant, usually the nurse, who also holds the speculum and who stands at the left of the operator The cervix at the angle on one side (the left first) is seized with a tenaculum and the knife (shown in Fig 1) is made to transfix the cervix on one side of the angle This done, the tenaculum is loosened and reinserted in the lip near the lower border near where the line of denudation is to terminate on that side, and the knife is drawn forward, making the denudation with one stroke The knife is again inserted at the angle on the some side of the cervix, but on the opposite flap, and it is denuded in the same manner If the tissue to be removed remains attached at the angle a few strokes upward with the other cutting edge of the knife severs it so it can be removed The same thing is repeated on the other side

In making the denudation the knife is held at such an angle that rather more tissue is taken from the inner than from the outer surface so as to remove the ridge along the margin of the new canal of the cervix, which if left would prevent satisfactory coaptation of the flaps In denuding with scissors this nearly always remains and must be carefully trimmed off afterward, considerable time being consumed in doing so The sutures of [illegible] gut [illegible]rted by [illegible] of the special curved needles described above, being threaded with a carrying thread It is preferable to insert the outer or lower suture first, so as to get perfect coaptation of the edges of the flaps The sutures are brought out on the margin of the new canal upon the mucous surface and not upon the denuded surface As each suture is passed it is clamped by pressure forceps and handed to an assistant to hold All the sutures on both sides (three on each side being usually sufficient) are inserted before any are tied Then the flaps are separated, and they are thoroughly irrigated with a solution of bichlorid 1 to 2,000 or 1 per cent solution of lysol The sutures are tied from without inward, or from below upward, tying that at the angle last The ends are cut about an half an inch from the knot, the vagina is washed out, and the patient is removed from the operating table to the bed No dressing is applied to the cervix or vagina

108 West 73d Street

CIRCUMCISION NOT NECESSARY IN YOUNG CHILDREN

Read in the Section on Diseases of Children, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY W B PARKS, M D
ATLANTA GA

I do not propose to discuss the theory offered by the laity and some doctors that circumcision is necessary from a sanitary standpoint, nor do I propose to criticise a Jewish custom or change a church ordinance, but I desire to show the etiology of a long or abnormal phimosed prepuce in male children I desire also to show how this abnormal prepuce can be shortened without circumcision We will first notice these long prepuces found in children The cause can be found by the following examination If we retract the prepuce as far as we can without using any violent manipulations, we find at the juncture of the mucous membrane with the true skin a constricted band that has at some time undergone an inflammatory process, this constricted band plays just in front of glans penis the action of which pulls down and forward resulting in a mechanical action, lengthening the prepuce This mechanical force that pulls downward and forward is very slight, yet, if we will remember how loose the true skin is that covers the whole organ, the least traction together with a little aid from gravitation is enough to make this long abnormal prepuce What causes this constricted band which has at some time undergone an inflammatory process No doubt it is caused from improper adjustment of the cloth or napkin that is constantly used on babies which is intended to keep them dry, but keeps them wet ordinarily, with careless nurses This napkin steeped in hot urine, with the little organ imbedded in its fold or pushed on either side with undue force will be quite sufficient to set up an irritation causing the ordinary adhesions of the prepuce to the glans penis and the constricted band

Treatment without circumcision consists in the plans laid down in the standard works on diseases of children, Starr, Keating and others, which operation is dilating prepuce, breaking up the constricted band Much care must be observed in dilating this constricted band A small sized uterine dilator or ordinary dressing forceps is a very good improvised instrument, but the dilation must not be too rapid You must dilate every second day and as much as the child can bear each time, leaving the instrument in the stretched prepuce from three to five minutes at each operation If the operator should use rapid dilation he would find on the second day much inflammation, and, while waiting for the traumatism to subside the constricted band and phimosis would be aggravated and this is the reason why so many can not see what they accomplish by this dilating process When you succeed in relieving this constriction in a dilated state, the prepuce will gradually shorten until it is in the normal position To complete this operation it takes from twelve to fourteen days I have used very successfully in the after-treatment, or when the adhesions are broken up, campho-phenique with equal parts of olive oil I inject this under the prepuce with a common rubber ear syringe, lubricating and distending prepuce, at the same time allaying irritation and preventing a return of the adhesions

This constricted band was brought to my notice in the treatment of a young man for the ordinary specific urethritis After making the first prescription for him he passed from under my observation for about three weeks on his summer vacation On his return instead of prepuce showing one-third of glans penis (which I noted when he applied for first treatment) it had elongated almost an inch On attempting to retract the prepuce I found this constricted band at the juncture of the mucous membrane with true skin, and retraction was a physical impossibility After waiting for the inflammation to subside I practiced this dilating process until band was broken up, and in a few days prepuce had retracted and, instead of showing one-third of glans penis, it showed fully two-thirds, convincing me that when we have an abnormally long phimosed prepuce there is an abnormal cause and this can be removed by a very simple operation By relieving this condition without the knife you save the patient from mutilation, besides you protect a gland for which nature has provided a covering I saw an article in the *New York Medical Journal* a few years ago advancing this theory That instead of having a congenital stricture of meatus it was caused from an exposed gland robbing it of its natural moisture that the gland secreted and, thereby atrophying the tissue, also contracting the caliber of meatus

The following are a few of the fifty successful cases treated within the last two years

Case 1 —A boy aged 10 years, long prepuce with adhesions Commenced treatment July 3, 1894, broke up adhesions after inflammatory symptoms had subsided, practiced dilating process every second day On the 14th day constricted band was completely broken up with no inflammatory action and could notice a perceptible shortening of prepuce Saw patient twelve months after operation, prepuce had shortened to normal length

Case 2 —A boy 4 years of age, long prepuce with adhesions with the usual nervous symptoms, broke up adhesions with considerable inflammation to prepuce, used distention of prepuce with carbolized oil for six days, commenced dilating six days after adhesions were broken up, dismissed patient eighteen days after first treatment without any noticeable shortening of prepuce Saw patient at intervals from one to three months, at the expiration of one year prepuce was shortened to normal length This patient, however, had one convulsion two months after operation

Case 3 —A boy aged 5 years, long prepuce Commenced treatment Aug 2, 1894, broke up adhesions, removed considerable amount of smegma, commenced dilation second day after first operation, dilated every second day for fourteen treatments Constricted band relieved Saw patient one year afterward, prepuce normal length

This operation will not at all apply to that class of patients who have reached the age, or near the age of puberty, for in those cases, after the constricted band has been relieved by dilation, there is a redundancy of tissue that will not allow the shortening to take place Hence all those cases which have passed the age of 10 to 15 years can not be treated by the plan herein outlined, unless of recent origin caused from acute inflammation

DISCUSSION

Dr **Bell**—I would like the doctor to give us the means of dilating

Dr **Parks**—The small uterine dilator or dressing forceps, or any forceps with which you can make gradual dilatation, will answer the purpose After each dilatation and after the adhesions are broken up, I distend the prepuce with carbolized oil, which insures their non return

Dr J W **Byers**, Charlotte, N C —Is the infantile prepuce not normally very long and adherent?

Dr **Parks**—Always The point brought out in the paper is that the constricting band is the cause of the long prepuce By breaking up the adhesions and then dilating this band, you shorten the prepuce without circumcision

EXAMINATION OF EYES IN THE PUBLIC SCHOOLS OF BALTIMORE

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

BY HERBERT HARLAN, M D , AND
HIRAM WOODS, Jr , M D
BALTIMORE, MD

The control and management of the public schools of Baltimore is in the hands of a board of twenty-three commissioners, one being elected by the city council from each ward, and the mayor, ex-officio The city council must appropriate all the funds used by the board

Early in the fall of 1895, a resolution was passed by this board to have the eyes of all children in the public schools examined by an oculist of recognized standing, provided such examination could be made without any expense Later the matter was left in the hands of the committee on health, which committee was composed of three physicians We were asked to consult with this committee as to what could best be done As a result the following plan was adopted First, to have the teachers instructed how to test the eyesight of all the children Second to have the eyes tested by the teachers and a blank (A) kept for each child showing the result of this testing each year The blank to be transferred from grade to grade and school to school with the child Third, whenever the vision was found to be below a certain standard or there were complaints of the head or eye pains produced by studying a notice was to be sent to the parents advising them to have the eyes examined by an oculist

We expected by this means first, to have attention called to many unsuspected defects of vision Second, to show by a glance at the record whether the vision grows worse in any case from year to year during the eight years of school life the Baltimore system contemplates Third, possibly to show that there is a greater percentage of deterioration of eyesight in certain badly lighted and ventilated schools Fourth, to have parents' attention called to defects in children's eyes and to have rest with them the responsibility for the proper care and treatment of the eyes

In December the following circular and accompanying blanks and test cards were sent to the principals of all schools, and just afterward a meeting of the principals was called at which a practical demonstration was given of the method to be used in making the tests

This plan was worked out in detail and submitted to the board and later our attention was called to an article by Dr Allport, reprinted in the current number of the *Health Magazine*, from the paper published in the Journal of the American Medical Association, March 2, 1895

The two plans are almost identical and it would seem that like circumstances, such as gratuitous services and large numbers of children, resulted in a similar evolution as the best that could be done under the circumstances

The chief objection to the plan is having the examinations made by the teachers This objection can be greatly lessened by some trouble taken to enlist their hearty coöperation and care in the wording of the instruction for making the tests

So far as the children are concerned occasional mistakes are of little moment as in cases of defective vision, the work is reviewed by an oculist if the parents do their part So far as the statistics obtained are concerned, while interesting, there should not be much reliance placed in them, but, inasmuch as that is our opinion of all statistics, they are presented for what they are worth

The eyes of 53,333 pupils were tested Of these a little over 43 per cent were found to have 20–20 vision in each eye, and 39 per cent additional as good as 20–30 in the better eye Fifteen per cent came between 20–30 and 20–200, and 303, or 0 56 per cent had less than 20–200 in the better eye The lowest percentage (35 per cent) of normal eyes was found in the first or lowest grade, and the highest (56) in the eighth or highest grade Three things are to be considered, however, in explanation of these figures 1 Many children in the first grade know their letters very imperfectly and so get credit for much less vision than they really have 2 These reports are based on tests made with the correcting glasses on, whenever children wore such glasses, and defects have been frequently discovered and corrected by the time children reach the higher grade, and 3, unquestionably many children fail in their examinations and leave school before reaching the higher grades, on account of defective vision

The standard was fixed at vision as good as 20–30 in the better eye and no complaints of head or eye pains caused by studying Bringing in subjective symptoms, especially when many children are prone to prevaricate, was objectionable but it was the only way to include low astigmatism and hypermetropia with normal visual acuity in the number referred to the physicians for further examination

Now, as to the results Many parents paid no attention to the notices and public sentiment is not yet far enough advanced to enable a school board to require a return certificate and we will next year omit them from the notices sent to parents The greatest defect is closely associated with the question of dispensary abuse Baltimore has good schools and even the books are free, and the people with comparatively few exceptions expect everything connected with the schools to be also free The result was that, notwithstanding the wording of the letter of advice, almost all the children were sent to the dispensaries The clinics were overcrowded and it was impossible to give the deserving poor the attention they ought to have had This will be better another year when there will be fewer cases to be corrected and we will have the testing spread over eight or nine months

Much good has been done, both in arousing general public interest in the question and in the direct benefit many children have received Much greater good may be expected to accrue in the future

TABLE SHOWING TOTAL RESULTS OF TESTS BY TEACHERS

	GRADES								
	1st	2d	3d	4th	5th	6th	7th	8th	Tot'l
Number of pupils in each grade whose eyes have been tested	14,986	10,370	8 519	6,975	5 350	3,633	2 198	1,302	53 333
Number having 20–20 in each eye	5,340	4 278	4,049	3,322	2,581	1,776	1,207	785	23,280
Number having less than 20 20 in *each* eye but as much as 20 30 in *better* eye	6,982	4,322	3 071	2,503	1,808	1,197	660	401	20,944
Number having not 20 30, nor less than 20 200 in *better* eye	2,624	1,700	1,342	1 094	909	628	293	158	8 248
Number having less than 20 200 in *better* eye	40	69	54	40	37	26	33	4	303

The following circular was sent to each teacher

OFFICE OF THE COMMISSIONERS OF PUBLIC SCHOOLS

BALTIMORE, Oct 29, 1895

To Teachers —At a meeting of the Board held on the 15th inst, the following resolutions were adopted

Resolved, (1st), That the eyesight of all the children in the public schools shall be tested by the school teachers at the beginning of each school year (the work this year to be done as soon as practicable), and a record kept by which any deterioration which may take place may be noted from year to year

Resolved, (2d) That the Committee on Health appoint two or more oculists of recognized standing (who shall serve without pay), whose duty it shall be to instruct the teachers in the proper methods of making said examinations and keeping said records, to fix proper standards of sight, and to make, from time to time, such reports and recommendations to said Committee as they may deem advisable, to the end that the children in the public schools of Baltimore shall receive the least possible injury to their eyesight during their school life

Resolved, (3d), That said oculists shall be privileged to visit the schools when necessary, and also to examine any scholar's eyes

Resolved, (4th), That the Committee on Health be empowered to prepare the necessary test-cards, instructions and blanks for reports, and to do whatever in their judgment may be necessary to carry the resolutions into effect, and that the Committee on Printing have the necessary printing done

This Committee has appointed Dr Herbert Harlan and Dr Hiram Woods the oculists contemplated in the above resolutions The gentlemen named have suggested, and this Committee has approved, the test cards and blanks sent herewith, and the following instructions

JAMES BOSLEY, M D,
M B BILLINGSLEA, M D, } Committee
D W SMITH, M D,

Instructions to teachers in reference to the examination of the eyes of the school children

A blank (A) is to be filled out for each pupil The utmost care must be taken that the tests for vision be accurate The records must be arranged in alphabetical order and kept in the envelopes provided for that purpose

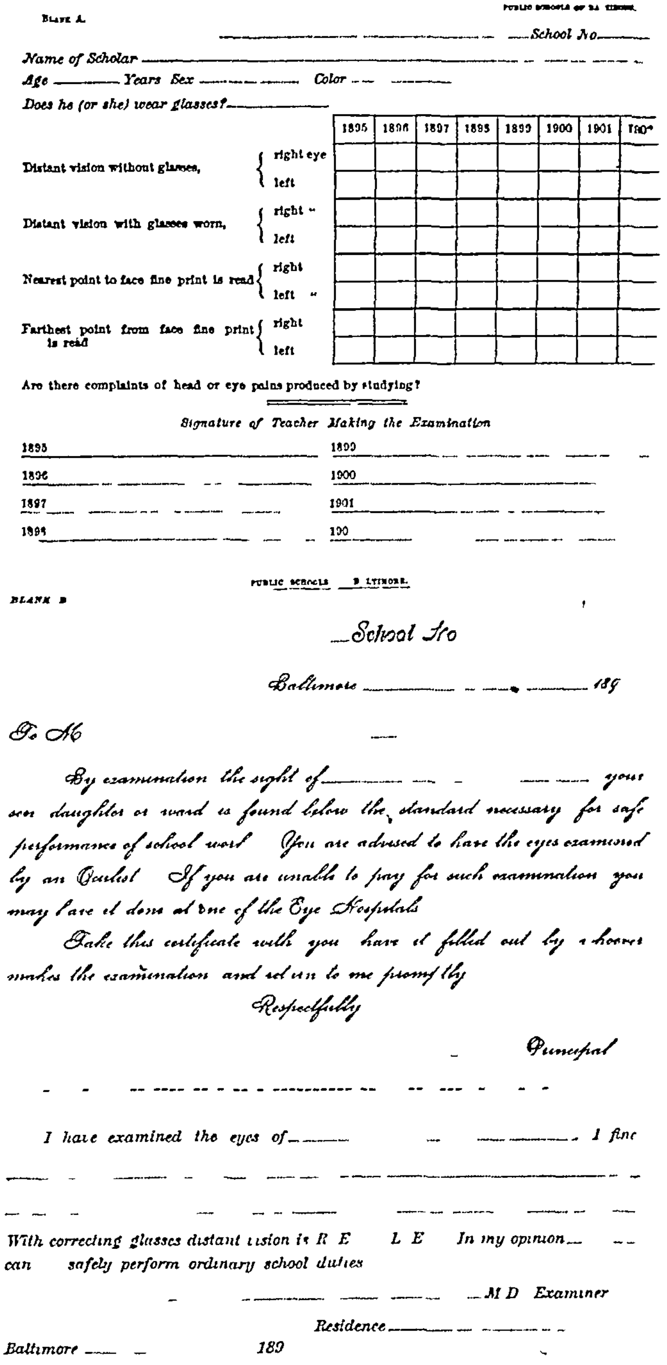
When a pupil is transferred the record card must also be transferred

The tests for vision are made in the following way The pupil is placed with his back to the light and twenty feet away from the large distant vision card This large card should be placed facing the pupil and in the best possible light

One eye of the pupil is then covered, as with a card, and he is directed to spell the letters on the distant card The vision of one eye being noted in the column for distant vision for the year, the other eye is tested and noted in the same way The size of the letters is such that the largest one should be seen by a normal eye at 200 feet, the next in size at 100 feet, the next size at 70 feet, and so on down to the bottom row, which should be readily recognized at 20 feet

The distant vision is expressed by a fraction, of which the numerator is the number of feet separating the pupil and the test card, and the denominator the size of the type seen at that distance For example, if at the prescribed distance of 20 feet the bottom row of letters is read, the vision would be 20-20 or normal

Suppose, however, only the next to the bottom can be seen that row ending in the figures 30, in that case the vision would only be 20-30 If only the line above that can be seen the vision is 20-40, and so on up the card, until if only the large letter at the top can be seen the vision is 20-200



PUBLIC SCHOOLS OF BALTIMORE

BLANK A.

School No

Name of Scholar

Age *Years* *Sex* *Color*

Does he (or she) wear glasses?

		1895	1896	1897	1898	1899	1900	1901	190
Distant vision without glasses,	right eye								
	left								
Distant vision with glasses worn,	right "								
	left								
Nearest point to face fine print is read	right								
	left "								
Farthest point from face fine print is read	right								
	left								

Are there complaints of head or eye pains produced by studying?

Signature of Teacher Making the Examination

1895 1899
1896 1900
1897 1901
1898 190

PUBLIC SCHOOLS BALTIMORE

BLANK B

School No

Baltimore 189

To M

By examination the sight of your son daughter or ward is found below the standard necessary for safe performance of school work You are advised to have the eyes examined by an Oculist If you are unable to pay for such examination you may have it done at one of the Eye Hospitals

Take this certificate with you have it filled out by whoever makes the examination and return to me promptly

Respectfully

Principal

I have examined the eyes of *I find*

With correcting glasses distant vision is R E L E In my opinion can safely perform ordinary school duties

M D Examiner

Residence

Baltimore *189*

Blanks A and B

Some cases will be found where no letter can be made out at the distance of 20 feet In this case the pupil must go slowly nearer to the letters, still keeping the eye not under examination carefully covered until it is found what is the greatest distance at which the largest letter can be recognized Suppose a case where this can only be done at a distance of 15 feet, or perhaps 7 feet, the vision would then be only 15-200 or 7-200

The test for near vision or reading is simpler It is merely to note approximately in inches the nearest point to the eye and the farthest point from the eye the small letters or words on the near vision card can be made out

In the distant vision test only that row of letters of which the whole row can be correctly made out is to be counted

In the case of those pupils having normal vision, or who do not complain of constant headache, or eye pain, or inability to use the eyes for studying, the records are to be kept for the purpose of noticing if there be any deterioration of the eyes from year to year

In the case of those pupils whose vision in the better eye is below 20-30, or who complain of headaches or eye pain, blank B is to be filled out by the principals of the various schools and sent to the parent or guardian of the pupil in question

In case no attention is paid by parent or guardian to these notices after two weeks, the records of those cases are to be sent by the principals to the oculists of the board for their examination and consideration

In making the tests two sources of error are to be specially guarded against First, pretended inability to see, and second, a learning of the letters and their repetition by rote The latter can generally be overcome by requiring that the letters be named from right to left or in irregular rotation

DISCUSSION

Dr B A Randall, Philadelphia—While urging a more precise and exhaustive study of school eyes, if possible, in the report of the committee of last year, the doing of such work as this was commended as a forward step, far better than nothing, and better than much that had been previously done The only [illegible] criticism is, that as the medical examination of those found to be defective was not made at the school, many did not seek it and many more were neglected in the crowded clinics, but it is almost sure that the future results will be better and will create gradually the needed public opinion and pave the way to more ideal investigations

Dr H B Young, Burlington, Iowa—It embodies the idea which I maintained in my contribution, and not included in the report of the committee last year, the greatest good for the greatest number

Dr F Allport, Minneapolis, Minn —I am sure that Dr Harlan and I both feel that Dr Randall's plan is undoubtedly the best to be pursued because we should be satisfied with nothing less than perfection, but we are working in a practical line with the hopes that we will later be able to get what we want while now we are compelled to take what we can get

Dr Herbert Harlan, Baltimore—We claim no priority for the plan and well know it is not perfect, but it is practical, has been put in operation and has already done much good

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THE COÖRDINATIONS OF THE OCULAR MUSCLES

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta, Ga. May 5-8 1896

BY C M. HOBBY, M.D

IOWA CITY IOWA

When two or more muscles act together for a common purpose their movements are coördinated, but the term coördination is more commonly applied to the similar, but more complex function whereby two or more members of the body are acted upon, by the muscles or groups of muscles moving them, to the execution of a common purpose In this sense the movements may be simultaneous or successive the objective, instantaneous consecutive or continuous The chain of ideation will, action, is the same as in a simple voluntary movement only complicated by the necessity that the different actions should accomplish a single purpose As certain movements occur from birth, and are therefore called instinctive it has been supposed that certain other movements which require coördination must also be instinctive but this is not to be accepted without demonstration While the limits of this paper do not allow more than a statement of the fundamental principles which have been demonstrated in reference to the coördination of the external eye muscles, it may be premised that no hypothesis in regard to such coördination should be considered which is not in harmony with what is known of comparative anatomy and physiology, as well as human anatomy and physiology

Paley defines instinct as 'a propensity prior to experience and independent of instruction" The coordination of movements in suckling and in winking, are the instinctive coördinations exhibited by the human infant, associated movements of the eyes, arms and legs are observed also, but they are devoid of purpose, and are imperfect examples of coördination

Without considering, at present, the influence of inherited habit in establishing coördinations, we know that the child, by experience, acquires control of the various muscles and learns to walk, a consecutive coördination of high grade, learns to use hands, and usually one better than the other, and by experience and long continued practice may learn to use both hands separately for a common purpose, as is especially illustrated by the rapid co-incident and consecutive movements of a great number of muscles of both hands, arms and legs

We note in all these coordinations certain facts important to the consideration of the present subject Not all persons possess the same facility in acquiring high grades of coördinative power, some engineers can, by long practice, train their steps to an approximately equal length, they can measure distance by pacing to an accuracy 98, 99, or 99½ per cent, others can never attain above 95 per cent, and the same is noticed among musicians, proficiency is the result of continual practice There are differences between individuals in the quality of the work, and between the quality of the work, of the same individual, at different times Disuse of the practice of coördination for a considerable time, diminishes its accuracy, examples of this are on every hand

We can say of muscular coordinations in general, that they are acquired by practice, improved by repetition, and fluctuate in quality, independent of disease they may, under favorable conditions, approach closely to perfection, but are always *approximations*

We have no reason to consider the coordinations of the ocular muscles as different in any respect from the coördinations of the voluntary muscles in general

The purpose of ordinary ocular coördination is to so move the globe of both eyes that the mind may interpret the retinal images singly, and this implies that one eye is directed so that the image of a particular part of the field of view falls upon the *fovea*, or place of fixation of the retina, and the other eye either simultaneously or successively is similarly directed, so that the image of the same particular part of the field of view falls *near or upon the corresponding* place in the second eye It will be noted that the word ' point" has not been used either in regard to the field of view or in connection with the place of fixation because the mathematical definition of the word as ordinarily used in physiologic optics, would lead to inferences not intended The so-called point of fixation is an area of considerable magnitude The subject of binocular vision is too comprehensive [illegible] taken up here, but some [illegible] of the co ative physiology of vision, and of the method, use and value of so-called binocular vision will be required, especially as many modern text books ignore the profound work of the early physiologists

What we see, is the interpretation the mind puts upon retinal stimulation, so called optic illusions are mental deceptions Binocular vision as it exists in man, is of doubtful existence in any of the inferior orders except the quadrumana It is probable that in the inferior orders of mammalia a more effective peripheral and less effective central vision exists The dog and the horse, for example, possess poor central vision, and they use the peripheral portions of the field nearly, if not quite, as well as the central

In some of the orders no attempt at fixation is made From an evolutionary point of view, binocular fixation was a late acquisition

The habit of fixing an object with both eyes is not instinctive in the case of the human infant, and is not acquired until several weeks have passed, and then only near objects are transitorily fixed Some birds, and some fishes, possess very acute monocular vision, and the fallacy that binocular vision was essential to the estimation of distance, shape and size of objects, was long ago pointed out, and illustrated by the marvelous acuteness of such estimations by birds of prey, that only possess monocular vision Men with one eye easily acquire capability of estimating distance In fact our estimate of distance depends upon our familiarity with the surrounding objects Neither is the stereoscopic vision, or the appearance of relief produced by looking at two pictures on a plane surface through a stereoscope, a function of binocular vision altogether, the fusion of two parts of separate pictures into a common mental impression necessarily requires both eyes, but the appearance of relief on a plane surface can be produced with one eye

The mental fusion of the retinal images of the two eyes is not the mixture of two impressions, it is either, mentally, when much displaced centrally, two different impressions, or it is a single mental impression taking varying characteristics from the two images, as the mind is directed to one, the other, or both For example, using different colored glasses before the eyes, the mind does not recognize an equal mixture of the colors as the combined impression, but may recognize either of the colors alone or either tinted with the other Nor were the old observers altogether wrong, who thought that the mind was affected alternately by the two retinal images, this is sometimes demonstrable

So far as binocular vision is concerned it introduces no addition function, but augments the power of monocular vision and amplifies the peripheral field of view Ordinarily in a healthy individual with normal eyes, the practice of binocular coördination is very accurate, and it must be noted that no sets of muscles are so frequently and continuously employed, from the earliest period of life, as the muscles that move and direct the eyes Yet if a healthy individual looks at a star, with a card before one eye, when the card is withdrawn a movement of the star will appear to him, and this movement he can readily determine is due to the adjustment of the covered eye to the direction primarily fixing the object There is an instant of diplopia while the error in pointing is being corrected So long as the individual is able, with both eyes open, and without extraneous assistance, to so direct them that the mind accepts the two retinal images as a single communication we can say that there is coordination, when, however, the two eyes can not be brought into a common fixation, there is incoördination

But while coordination may take place, it is possible for it to lack that high degree of perfection which we find, usually, in those who have perfect and easy vision and these difficulties of coördination have been considered one of the sources of uncomfortable vision or asthenopia Without accepting as demonstrated the significance implied by the various terms introduced by Dr Stevens, the nomenclature of the deviations from perfect coördination, when the natural incentive is removed, is so convenient that it may be used in discussing the different phenomena in connection with coördination We can say, therefore, that slight amounts of the so-called heterophoria are almost universal and we find that from 6 to 8 degrees of exophoria and from 4 to 6 degrees of esophoria are compatible with normal coordinative power and ease of vision As the whole practice of the ocular muscles is normally exerted in the planes passing through the optic centers of both eyes, but little deviation in a vertical direction is found in the movements of a normal eye, excepting under pathologic conditions rarely more than from 15 to 30 minutes of arc When a card is held before one eye and the other is directed at a distant object the covered eye is normally directed toward the same object, but not necessarily directly at it The angle the visual line of the covered eye makes with the visual line when the eye is uncovered, is called the angle of heterophoria, and is measured out or in from the vertical, and above or below the horizontal It is easily seen that if the mind be able to direct the two eyes to a common point, when both are in action, the conditions for binocular vision are fulfilled It has been claimed, however, that if the eyes were not directed to a common point, as well when one was covered, or when the natural incentive or stimulus to action was interfered with, as when both were at liberty, that the condition was an abnormal one, and that such deviations were the cause of many varieties of asthenopia This brings us to the consideration of the relation of these apparent difficulties of coordination to asthenopic conditions While convinced by repeated experiments and the observation of a considerable number of patients, that accuracy of coördination when one eye is covered or obstructed, as with the Maddox rod, prism or the phorometer, is not essential to ease of vision, it very frequently happens that asthenopia and difficult or imperfect coördination are coincident If we examine the conditions in which heterophoria is found, we can assign as possible causes producing the so-called muscular asthenopia, such general diseases as produce enfeeblement of the muscles generally, and such forms of cerebral and spinal lesions as are capable of producing ataxic phenomena in other parts, also neurasthenic conditions, which render irregular, or enfeeble or make uncertain, the ordinary muscular actions, or which are accompanied by extraordinary manifestations in muscular control, or impaired continuity of action We must consider also chorea and the allied disturbances of the nervous and muscular systems Then we have the influence of ametropia, and especially of astigmatism, in producing demands for irregular and uncertain accommodation and convergence

Very important is the influence of misdirected experience, such as the habit of using one eye, whether congenital or acquired, or the result of forced monocular work in watchmaking, microscopy, the use of the transit, etc In this connection, the habit of sitting obliquely at the desk in studying or writing, the consecutive succession of movements in copying from one book to another as in the case of book keepers, and the copying from manuscript or typewriters These conditions lead to excess of action of certain muscles, and a habit of use in directions away from the straight forward line which our methods of measurement assume as the normal

Again, the individual who has had a long rest from books and close work may find great difficulty after a few years in resuming continuous application of vision to a book, and the asthenopia that comes on after resuming the steady use of accommodation and convergence may present all the painful symptoms of muscular asthenopia, with the least possible amount of muscular insufficiency, when tested in the morning, and with considerable after the day's work

In testing these cases by the phorometer, the Maddox rod, or by the more efficient means of using in a dark room a colored glass dense enough to cut off all vision of other objects than a small light and leaves no inducement for the will to direct the eye, deviations from coincidence of the visual axes can be easily shown in the majority, and lack of spontaneous coincidence may be found in one or both eyes, and the apparent insufficiency can be located, sometimes in special muscles But as stated before, a considerable amount of uncertainty of direction, when the natural guide of complete similar retinal images is wanting, may be compatible with perfect ease of work

Excepting that they are weakened by disease or disuse, we can ascertain very little about the actual strength of the ocular muscles, we have no means of measuring the energy used in their contraction The prism in no sense weights the muscle, by changing the angle at which an object is seen it introduces an obstruction to coördinative impulse, requiring readjustment to secure binocular vision, but it can not measure the energy used in contracting a muscle Nor can we say, when we find an exophoria by our tests, of say 6 degrees, whether it is because the external pull is stronger than the internal, or whether the mind awaits the visual stimulus before directing action So while we may have a great amount of assurance that all of these failures, in directing the axis of the covered eye, are to be considered rather as failures to look straight than "tendencies to look wrong", and while it may be doubted if those failures in direction, which are so promptly rectified when the eye is brought under the domination of the will are to be considered any more pathologic than the obstinate muscles of the back and legs that deny the would be bicyclist, in his early trial, the assurance of equilibrium in the saddle, still the indications of heterophoria are not to be neglected in the careful study of muscular asthenopia And whether they are pathologic or not, whether they cause asthenopia, are one of the symptoms resulting from a common general cause, or are of no significance whatever, there can be no doubt that back of all muscular insufficiency and difficult coördinations it is necessary to look for the source of the disturbance, and we may feel reasonably sure that while muscles may be enfeebled by disease or disuse, we shall rarely find failure of coordinative power resulting from abnormal increase of strength

DISCUSSION

Dr C W Kollock, Charleston, S C —It has been my cu tom to prescribe the glass best adapted for the case and there was insufficiency afterward to hunt for the cause of th trouble in the general health before prescribing prisms or cu ting the muscles

Dr G C Savage, Nashville—I believe that the lower an mals see just as men see as to direction The acutest vision when the image is the sharpest We know how quickly th horse shys when it gets only a side view of an object, but go properly the instant its head is turned straight toward When a dog chases a rabbit he fixes his eyes straight upon Watch two roosters fighting, they do not turn their heads sid to side, but each is looking straight at the other So I see n reason for believing that animals have better vision periphe ally than centrally There is such a thing as muscle coörd nation in muscle weakness I think orthophoria is a norm condition If that is so exophoria is abnormal We ma have exophoria of several degrees which may not excit trouble until the nervous system is in an abnormal condition but while it may not give trouble it is always a sort of menace

Dr D S Reynolds, Louisville—I wish to correct a stat ment of Dr Savage's I have seen cock fights and hav noticed that the roosters always turn their heads to one sid and use their eyes separately

Dr C M Hobby, Iowa City—The anatomic structure of th retina of a man is as much superior to that of the dog as th retina of the eagle is to the eye of man The assumption tha if a covered eye does not follow its fellow it is abnormal is no well founded, neither is the assumption of the identical point of the retina A difference of size of retinal images of 10 pe cent is compatible with mental association

ON CERTAIN SUBJECTIVE VISUAL SENSATIONS

Read in the Section on Ophthalmology at the Forty seventh Annua
Meeting of the American Medical Association held
at Atlanta Ga May 5-8 1896

BY ALEX W STIRLING, M D, C M (Edin),
D P H (Lond)
ATLANTA GA

I recently received from a committee of the Ophthalmological Society of Great Britain a request tendered no doubt to all its members, for such observations on the visual sensations of epilepsy or migraine as I might be willing to record from my experience or practice Interest in this matter had been specially developed by a lecture delivered before that society by Dr W R Gowers, in which he had demonstrated the importance of these symptoms, not only in relation to the possible light which they may throw upon the true nature of these diseases, but also in connection with the anatomy and physiology of the still *imperfectly understood* centers for vision

Fortunately for me, I am unable to record any personal experiences of those maladies which are most desired by the society, but I am able to describe them as related by a number of my patients This will serve to illustrate the points of chief importance to ophthalmologists

Such an experience, "though unreal, the subject of it is," as Gowers says, "as a sensation, a profound reality, which confuses the mind and may make even recollection painful Hence the opportunities for ascertaining trustworthy facts are very rare, and when they come it is important that they should be made the most of" I venture, therefore, to bring before you some of these partly for their own sake, and also because possibly by so doing some of the members of the AMERICAN MEDICAL ASSOCIATION may be stimulated either to forward the wishes of the British Society or to form a collection for themselves

I shall choose, as a type with which others may be compared, the case of a professional man, whose usefulness has been considerably impaired by migrainous attacks, dealing however, for the sake of time, almost solely with his visual experiences

The attacks were of the following character First came the spectra lasting some half hour, during which time voices sounded metallic and far away, and before their withdrawal pain began, especially behind the eyeball of the side opposite to that on which the field appeared to be affected, *i e*, in the cerebral hemisphere in which the pathologic process was going forward but also piercing through from one temple to the other and continuing for perhaps twelve hours The pupil on the side of the hemisphere involved was dilated to twice the size of the other, due, no doubt, to irritation of the sympathetic While the pain remained, and afterwards for many hours, his mental faculties were dulled He never vomited and had slight nausea only at the outset

The spectra were of the following description They might be divided into two kinds, one of which, by far the more common, was succeeded by headache, and the other, which the patient had experienced only some half dozen times and not at all during recent years, was of a different aspect and was unassociated with either headache or nausea

The more usual type affected the left field of vision in about nine tenths of the attacks, the first warning of which consisted generally in a sudden blank of small dimensions, on one side midway between center and periphery This increased in size until it had blotted out the whole or part of the half field Sometimes, in the early stage, when looking at a small object, the blindness seemed to be, as the patient expressed it, "trying to get hold," with the result that the object would be momentarily completely hidden from view (the fixation point being completely involved), then entirely visible, then hidden on one side alone, and so on until the cloud had settled down on some particular part of the field, generally in the middle zone

In the course of a few minutes the blank was modified by the appearance of a bright silvery shimmer, more like sunshine on the gently rippling surface of a pond than anything else the patient can imagine, but having a definite form, a crescent, often confined to one quadrant of the field, concentric with the center and outlined on the convexity by zigzag lines in which no other colors were to be distinguished than the silvery sheen, while the lines forming the zigzags were generally longest in the middle of the curve and shortest at the ends, though he had seen them longest at one extremity, lying in the upper area of the field and crossing over the hemiopic line They never trespassed on the central area of the field This patient had also seen the spectrum lying as a curve horizontally above the level of the fixation point and reaching therefore into the second half field

The spectrum, which he has also likened to an incandescent electric light, and which was on one occasion composed, except the angled outline, of bright spots in rapid motion, after from ten to twenty minutes appeared to burn itself out, leaving a blank which most frequently, in the patient s own language 'affected the whole vision,' about as frequently, however, central vision remained, the part of an object looked at being visible while all surrounding it was dark At the expiration of two or three minutes the fog was dissipated from the center, though the sight continued impaired for some time afterward The acute visual symptoms lasted, on an average, perhaps ome thirty minutes

The second form of this patient's attacks consisted in a dark spot which appeared on the outside always, he thinks, of the visual field, over which it moved so as to involve at times the center and parts beyond it, lasted only about a minute, and was associated with no other symptom

All cases do not correspond with the foregoing description For instance, in another of my cases the spectrum formed an angled silvery line in the middle zone, apparently an inch in length, lying horizontally on one side and pointing to the center, but never reaching it or entering the other half field, with sometimes a second similar line nearly but not quite joining the peripheral end of the first at an angle of about 50 or 60 degrees Occasionally, and always as the signal of a specially severe succeeding headache, this spectrum was followed, or was altogether replaced by a dark spot the size of half a dollar, below the fixation point, which, when the patient looked at a friend's nose, cut off from view the mouth and chin, affecting therefore a part of both half fields of vision

In another patient, whose existence had been greatly embittered for many years by migraine, and in whom a large patch of the frequently associated xanthelasma occupied the inner end of both upper eyelids, zigzag or "fortification" colored spectra were associated with more complex figures, especially faces and forms of animals Gowers has never found such complex spectra with migraine, though they are not uncommon in epilepsy This patient is not a woman of high intellect and I have never been able to receive from her such a description of the angled spectra as I would care to transfer to paper, but her attacks appear to be pure migraine and, so far as I can understand, neither epilepsy nor hysteria, and there is no doubt about the deriding negro faces which she sees

Gowers has described six varieties of spectra, and has presented to the British Ophthalmological Society at least three sets of painting or drawings of some of these as a nucleus for a fuller collection, to which he hopes that others will contribute One of these is a second series by Dr Airy, to whom the profession was already chiefly indebted for reliable descriptions of the spectra Time is insufficient for the discussion of these here, yet one may draw attention to the peculiar fact noted by Gowers, and exemplified in my cases, that the position of most physiologic activity, the position of central vision, where one might expect excessive action, apparent as colored spectra, is in reality free from these, and also that the zigzag lines diminish in length as they approach it, while it is subject, on the other hand, to inhibition, appearing as a cloud or darkness The lightening-like outline of the spectra is also worthy of note, and probably has radical connection with the physiology of discharge in the cerebral cells

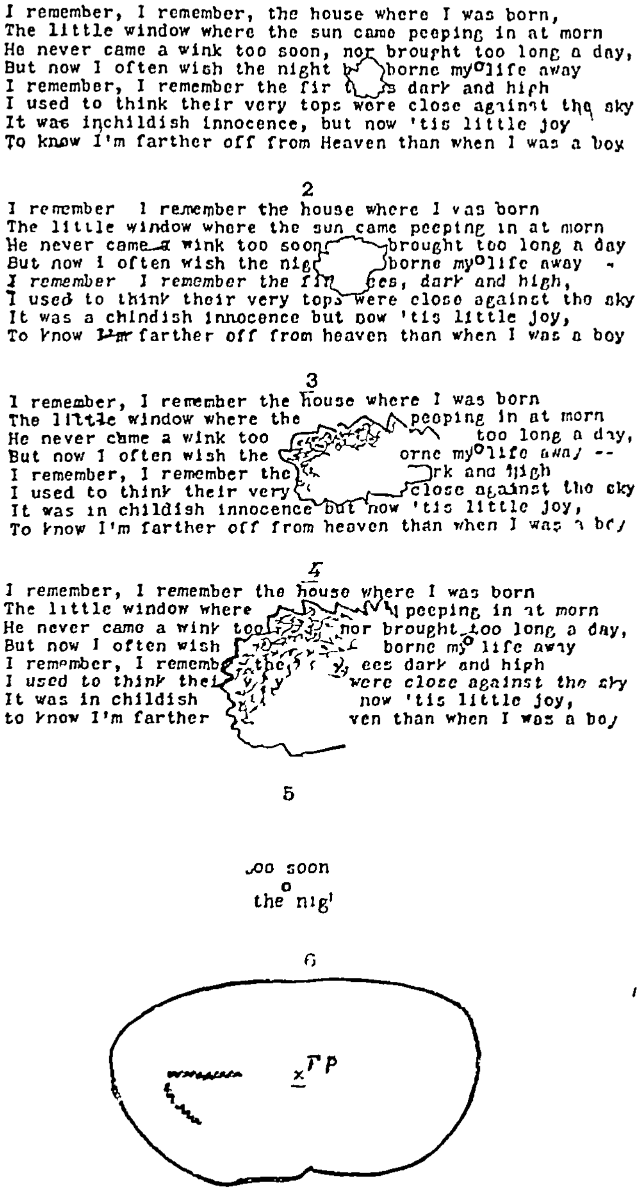
Gowers has considered epilepsy also I have no such cases to record, but although the duration of the spectra in it is comparatively short, epilepsy and migraine have features in common and connecting forms A marked difference lies in the more complex nature of the spectra already referred to as not infrequent in epilepsy, a feature, according to Gowers, never found in migraine

There can be no doubt that these spectra originate in the brain rather than in the eye, although it is not contended that ocular refractive or muscular abnormalities may not at times be the exciting cause of an attack They are associated in some patients with other cerebral symptoms, with similar affections of other nerves of special, as well as of common sensation and of motion Besides, as ocular symptoms they are not explicable by our knowledge of the anatomy and physiology of the eye, ophthalmoscopic examination during attacks has not revealed conditions which would account for them, and the fact that the spectra move along with the eyes is, of course, no argument

Certain of the features of these spectra require consideration in connection with the views generally held concerning the centers of vision in the brain These are usually said to be in the cuneus, in the occipital lobe, and in the superior and inferior occipito-temporal convolutions, and partial or complete disease of these on one side produces partial or complete homonymous hemianopsia of the opposite side, involving sometimes the whole or part of the macula and sometimes leaving it intact But these spectra, as Gowers has pointed out, suggest the participation of something distinct from these occipital centers Discharge or inhibition taking place in them would not produce a picture such as is here exhibited If unilateral, the sensations would be confined to one-half of the visual field, if bilateral, one would expect rather either a double visual manifestation, or at least one affecting more distinctly and separately each half field, than is shown by the practically constant appearance of the spectrum on one side though not necessarily observing the hemiopic line, but passing, to some extent, into the opposite

To explain this and other symptoms of these and other diseases Gowers has been compelled to postulate the presence of the higher visual centers in the angular convolution of which Ferrier had already obtained indications by experiment, but concerning this work, which may be accelerated by a sufficient number of observations on such cases, has still to be accomplished before their nature is completely understood He surmises that the visual nerve fibers are so arranged after leaving the lower centers in the occipital lobe, that both sides of each eye are represented in each of the higher centers The exact manner of their distribution is still a matter of uncertainty, but in each higher center the opposite eye appears to have the more important representation, while the higher centers in the two hemispheres have apparently so intimate a connection that the one seems able to compensate for loss of function of the other, a feature altogether absent from the lower centers The higher also differ from the lower in that, while in the latter partial disease produces a corresponding partial loss in the related half field, partial disease of the former lowers the function of the whole in a manner not yet understood

The following facts indicate the presence of these higher centers In the hemianesthesia of hysteria there is arrest of the functions of the other higher special sense centers in one hemisphere but never the hemianopia which results from disease of the lower center Instead, there is “crossed amblyopia,” i e, loss of vision in both eyes, except in a small central area of the opposite eye and a larger central area of that on the same side, and without relation to the half fields This indication is confirmed by organic disease due to hemorrhage in one hemisphere and by disease located in the region of the angular convolution When hemianopia does result from disease in a cerebral hemisphere, the remaining half fields are also affected, that of the opposite side being the more contracted The presence of these higher centers, Gowers has found to be still farther confirmed by the manner in which they explain certain pathologic facts found otherwise inexplicable, and their necessity for the hypothesis of their presence coincides remarkably with the experimental results obtained [illegible] The remaining bilateral central sensi[illegible] retina in the one [illegible] tional and [illegible] just referred to [illegible] relations [illegible] higher center


I remember, I remember, the house where I was born,
The little window where the sun came peeping in at morn
He never came a wink too soon, nor brought too long a day,
But now I often wish the night [illegible] borne my life away
I remember, I remember the fir [illegible] dark and high
I used to think their very tops were close against the sky
It was in childish innocence, but now 'tis little joy
To know I'm farther off from Heaven than when I was a boy

2

I remember I remember the house where I was born
The little window where the sun came peeping in at morn
He never came a wink too soon [illegible] brought too long a day
But now I often wish the nig [illegible] borne my life away
I remember I remember the fir [illegible] ees, dark and high,
I used to think their very tops were close against the sky
It was a childish innocence but now 'tis little joy,
To know ~~I'm~~ farther off from heaven than when I was a boy

3

I remember, I remember the house where I was born
The little window where the [illegible] peeping in at morn
He never came a wink too [illegible] too long a day,
But now I often wish the [illegible] orne my life away --
I remember, I remember the [illegible] rk and high
I used to think their very [illegible] close against the sky
It was in childish innocence but now 'tis little joy,
To know I'm farther off from heaven than when I was a boy

4

I remember, I remember the house where I was born
The little window where [illegible] peeping in at morn
He never came a wink too [illegible] nor brought too long a day,
But now I often wish [illegible] borne my life away
I remember, I rememb [illegible] the [illegible] ees dark and high
I used to think thei [illegible] were close against the sky
It was in childish [illegible] now 'tis little joy,
to know I'm farther [illegible] ven than when I was a boy

5

oo soon
o
the nig'

6

O—Fixation point x—Occasional position of fixation point
STAGES—1 a blank 2 a blank 3 outline now silver, 4 outline still silvery, 5 central vision intact peripheral clouded by thick fog

6 silvery speculum in another patient

With loss of the higher center, say in the left hemisphere, we have loss of all vision in the right eye, except in a small central area supplied by the right hemisphere, along with loss of vision in the left eye, except in a central area larger than that in the right, and also supplied by the right hemisphere Vision is lost in the periphery because both higher centers are required for its fulfilment, one being unable to carry on its functions in either eye Here we may recall the final stage of the spectra in the case which I have fully reported, in which the periphery of both eyes was blind, the central region being sensitive

The above facts being beyond dispute, Gowers has explained the relationship of the peripheral fields in the two eyes by the theory that when the peripheral visual fibers from the lower center pass to the higher center of the opposite side, they do so by traversing the higher center of the same side, and are therefore involved in disease of either higher center Each higher center thus containing fibers from the complete periphery of both eyes, an interference with one higher center is sufficient to annul the functions of the complete periphery of both eyes This theory may or may not be correct, but the bilateral spectra, as illustrated by the cases presented, seem to show a close connection between the visual centers in the two hemispheres, or even that they act almost as one center

It is interesting to observe here the curious fact noted by Gowers, that the field for color in every area, even in the temporal where the color is seen by one eye alone, is larger when both eyes are open than when one is closed, and farther that " there is a remarkable extension of each areal color field if a small white area is in the central region, and that this extension is almost the same if it is opposite" the one eye only, the other being under examination, though it is greatest where the white area is opposite both eyes

These demonstrations of the fact that increased stimulation of the retina of either eye produces increase in the area of the periphery sensitive to color in the other eye, supports the theory of the close connection between the two higher visual centers, brought out also by the blindness of the periphery of both eyes on interference with the functions of only one higher center

DISCUSSION

Dr C W Kollock, Charleston—I have had some experience with these visual sensations They have always been traced to indigestion My first recollection of it was some years ago, when it affected one eye only, beginning with haziness of vision and then the waves appear At times they appear in the outer fields of both eyes at the same time The wave passes across the field of vision and goes away at the upper angle of the orbit Once only did I notice them begin in the center of the field The attacks last about fifteen minutes

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TREATMENT OF OPTIC NERVE ATROPHY BY MERCURIAL INUNCTIONS IN CONJUNCTION WITH THE HOT BATHS OF THE HOT SPRINGS OF ARKANSAS

Read in the Section on Ophthalmology at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY O J SHORT, M D

HOT SPRINGS ARK

It is not the object of this paper to consider the different pathologic conditions found in optic nerve atrophy, but to give my experience in the treatment of this condition, no matter what the etiology, by the use of mercurial inunctions of ungt hydrarg U S P in conjunction with the baths of the Hot Springs of Arkansas

I have selected from my records five cases, each arising from a different cause The mode of treatment pursued is practically the same in each, only varying the conditions and circumstances as indicated For fear there may be some question as to the correct diagnoses I will state that in each case a like diagnosis was made by at least two oculists, men of unquestionable ability and in most instances members of this society

Case 1 —Mr C C O, aged 39, referred to me in May, 1893 On examination I found a gray atrophied condition of both optic nerves I could find neither specific, spinal, nor any other cause to which we could attach the blame In his history he stated that his mother became partially blind soon after giving him birth and remained so until her death The opinion of the attending physicians was that the blindness was due to childbirth

His vision, in right eye, could count fingers at two feet if in good light, in left eye, 20-200 He was ordered mercurial inunctions of 1 dram each night applied to the back and spine, and in addition to take a tub bath of ten minutes at a temperature of 98 degrees F, at same time to observe all necessary hygienic precautions On the tenth day symptoms of mercury were manifest in the mouth, on the gums and fauces The vision was the same as at previous examination At this visit he was ordered to use the inunctions every second night, increase the baths to 99 degrees F, and fifteen minutes duration, and in addition to apply a douche, 110 degrees F to the spine and a vapor bath of three minutes For the benefit of those not familiar with these baths, I will explain The vapor bath is in a room three by four feet which is full of steam, 130 to 140 degrees F, continually rising through the open slat floor from a stream of hot water which flows underneath On the twentieth day examination showed no sign of improvement in the vision of the right eye, while in the left eye it was 20-100 The inunctions were discontinued and he was placed upon kali iod sat sol three times a day, commencing with 10 drops and increasing 3 drops each dose, until 60 drops were reached, which was continued until the thirtieth day, when examination revealed no improvement in vision of right eye, in left 20-100 minus He was ordered to discontinue the kali iod and to resume the inunctions alternate nights and to continue the baths as before, at the same time I began the use of hypodermic injections of strych nit in the region of the seventh cervical vertebra, *beginning with 1 40 grain and gradually increasing to ¼* grain, toxic symptoms of the strychnia began to manifest themselves and its use was discontinued by gradually decreasing the dose On the fiftieth day, still no change in vision of right eye, left eye 20-60 He was instructed to use the inunctions as before On the sixtieth day no change in right eye, left eye 20-50 The patient decided to locate in Hot Springs Although he has been under my care since and I have experimented with almost everything, there has been no change in his condition since the end of the third month

Case 2 —A young lady aged 14 Referred to me June, 1894 Her father gave history of syphilis contracted five years before marriage and seven years before the birth of this daughter The patient had always been healthy except the trouble with her eyes Her sight began to fail about nine months previous to this consultation My diagnosis was optic nerve atrophy due to inherited syphilis I found the vision in right eye, 20-100, in left eye 20-150 She was promptly placed upon the mercurial inunctions, in conjunction with the hot baths, and at the end of the first week upon kali iod in addition, and instructed to report to me once a week for examination She improved rapidly from the first and at the end of the second month her vision in both eyes had returned to normal for the central, while the extreme outer fields seemed smoky or blurred She was discharged and I received a letter some months later from her father saying that she was attending college and that her eyes gave her no trouble

Case 3 —Mr G A H, age 47, consulted me in November, 1894 He told me that he had gray atrophy of the optic nerve and said he was getting worse all the time, although he had been under the treatment of a prominent oculist since the previous May, and that he had taken mercury pills until he was salivated and potash by the pound

Examination showed atrophy of both optic nerves, with vision in right eye 20-500, left eye 20-200 I could find no cause except that in March previous while on a railroad train, a steam heater burst, causing him to be unconscious for twelve hours and laying open his abdomen, in right iliac region for four or five inches, allowing the intestines to protrude This was properly attended to at the time and he made a good recovery and has felt no bad effects from it since He noticed *that his vision began to fail in May following, when he imme*diately consulted an oculist and had been under constant treatment since with the above results He was ordered to begin the inunctions of mercury, 1 dram each night, applied to his back and spine, and to take a bath of 98 degrees F , this was continued, with interruptions as the necessities of his physical condition demanded The progress of the disease was almost immediately arrested and he claims he could see better at the end of the second week, but this I failed to verify by actual tests At the end of the third month I could find no improvement in his vision, although he persisted in saying he could see better He was then advised that he could gain nothing by remaining longer at the Springs at that time He resumed his duties on the road until the following June, when he again consulted me, I found his vision the same as when he left He was again put upon the inunctions and baths In twenty one days his vision improved to, for right eye 20-400 left eye 20-100 Although he has taken two courses of treatment since, there has been no change in his vision

Case 4 —Mr T P M , consulted me in June, 1895 He had been poisoned by lead fourteen months previously His vision began to fail a month later, when he consulted an oculist who treated him for several months, and as he continued to grow worse he went to Denver where he was told he had optic nerve atrophy, due to lead poisoning and advised to visit the Hot Springs for the baths On examination I found an atrophied condition of both optic nerves with vision in right eye 20-80, in left eye 20-300 He was instructed to begin the use of the mercurial inunctions and in addition to take a bath of ten minutes at a temperature of 98 F On the eleventh day toxic effects of mercury were noticed, the inunctions were ordered every third day In addition he was put upon kali iod beginning with 10 drops and increasing 3 drops each dose, and ordered vapor baths This treatment was continued until he was taking 300 grains of kali iod three times a day, when symptoms of iodism presented and its use was discontinued by decreasing 10 drops per dose He was then ordered ten baths without the use of any medicine and dismissed at the end of the twelfth week His vision began to improve during the second week, final examination showed right eye 20-40, left eye 20-200 He is still using the unctions of mercury two or three times a week and writes me that his vision is improving

Case 5 —Mr W T R , referred to me in December 1895 He gave history of syphilis contracted twenty years ago His sight began to fail two years ago and he had been under the treatment of an oculist On examination I found a dirty gray atrophied condition of both optic nerves, accompanied by Argyll Robertson pupil, ataxic gait, and knee reflexes in right knee entirely gone, in left greatly diminished Vision of right eye 20-800, left eye only light perception He was placed upon mercurial inunctions together with the hot baths He insisted that he was getting worse both in vision and gait until the eighth day when he reported that he could walk much better and could tell the time of day by his watch which I verified The reflexes had slightly improved His ataxia has continued to improve up to the present time, March 1, 1896, with a vision in right eye of 20-500, left eye no change

My conclusions, based upon my observation of forty-one cases treated since residing in Hot Springs are

1 That in those cases having only light perception, treatment is of no avail, but where there is any vision left, that the progress can be checked, and if the vision has not gone below 20–200, unless from traumatic origin, we may expect benefit

2 That the mercurial inunctions in conjunction with the hot baths are always beneficial

3 That unless the origin is from specific, blood or mineral poisons that the use of kali iod is more often harmful than beneficial

4 That strychnia, as a rule, is good only in cases of spinal origin

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Let us have a Department of Public Health!

THE INCREASE OF INSANITY AND TUBERCULOSIS IN THE SOUTHERN NEGRO SINCE 1860, AND ITS ALLIANCE, AND SOME OF THE SUPPOSED CAUSES

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY THEOPHILUS O POWELL, M D
MILLEDGEVILLE GA

The negroes of Georgia, and I might say of the Southern States, up to 1860 enjoyed remarkable mental and physical health, and they were almost entirely exempt from certain diseases to which they are now not only very susceptible, but are dying much more rapidly from these maladies than the whites, namely, insanity and consumption

While they may indicate much less susceptibility to miasmatic fevers, they are becoming more and more susceptible to them every year, and when we consider that heredity is one of the leading factors in the causation of insanity with the whites and know that twenty-five or thirty years ago insanity and consumption in the negro could not have been attributed to hereditary predisposition save in a very few cases, couple this phenomenal increase in this race since 1860 with the inherited tendencies to these maladies, which we might say is just beginning to be manifested in full force, and when we remember that it is the insane and consumptive diathesis that widens and deepens by heredity from generation to generation, unless the laws of health are properly appreciated and conformed to, are we not justified in apprehending that the number of colored insane in the Southern States will soon be as large, if not larger, than the whites in proportion to the population?

The census of 1860 will show that there were forty-four insane negroes in the State of Georgia, and the majority had white blood in them, consumption in the full-blooded negro appeared to be just as rare at that time Up to and during the war, the negroes were the principal nurses for the consumptives of the South They washed the cuspidores, bedding and clothing of the consumptives, swept and dusted and in many cases slept in the rooms with them, and were more exposed to the tubercle bacillus than now as a general thing, still they resisted the disease Why then this sudden and radical change which makes them so susceptible to both consumption and insanity? These 44 were of a population of 465,698, or one insane negro to every 10,584 of population, and there is no good reason from family pride, or fear that their future hopes would be blasted, to suppose that the census of 1860 was incorrect as so far as it relates to the negro insane

The census of 1870 shows that there were 129 insane negroes in the State in a population of 545,142, or one colored insane to every 4 225 The census of 1880, colored population 725 133 insane, 411, or one to every 1,764 The census of 1890, population 858,815, insane 910, or one colored insane to every 943 of population

The rapid increase of insanity and consumption in this race is due to a combination of causes and conditions This race has developed a highly insane, consumptive syphilitic and alcoholic constitution which predisposes them to diseases which formerly they were free from In this disturbed and unstable condition they seem to be totally unable to resist the slightest exciting causes They are liable to succumb much more readily than the whites, especially is this true in regard to insanity and consumption These causes could not have existed prior to 1860 to any large extent or we would have had the same pathologic changes and results that we have now Up to 1865 it was to the interest of the owners not to allow them to violate the laws of health, therefore, their hygienic surroundings were carefully guarded from their youth Their lives were regular and systematic, and they were absolutely restrained from all dissipation and excesses, and when sick they had the very best medical attention and nursing, until pronounced restored by the physician Freedom removed all hygienic restraints and they were no longer obedient to the inexorable laws of health, plunging into all sorts of excesses and vices, and having apparently little control over their appetites and passions It is very manifest that these morbid tendencies and susceptibilities have been growing for the past thirty years, hence, their unstable condition, and susceptibility to and inability to resist attacks of disease

Dr Eugene Corson, in his paper on the "Future of the Colored Race in the United States," says, "All the information which I have been able to obtain has satisfied me that the race was a healthy one—even healthier in the main than the whites Since the war things have been reversed, the colored race as a race is not a healthy and robust one, their vitality is in a condition of unstable equilibrium, liable from any undue strain to give way To the physician practising in their midst this fact is constantly being brought home, and in many striking ways Before the war consumption was rare among them—to-day it has become very common, and the mortuary statistics show that about two colored to one white die of this disease The reports from cities show an even greater mortality The race has developed a highly scrofulous and tuberculous constitution which is manifesting itself in many morbid conditions and tendencies " "In returns from death from consumption in the last five years the colored death rate is nearly triple that of the whites " This was in 1887, and I have no doubt that it is now increasing rapidly in the rural districts

I am indebted to my old friend, Dr T S Hopkins, of Thomasville, Ga , for the following letter in regard to consumption in the negro race

"Since my return home I have been searching the records in my office hoping to find something therein in reference to consumption in the negro race I have in my office journals and books dating from 1783 to the present time In none of these have I found any reference to the matter When the negro is referred to at all he is placed among the immunes Knott and Gliddon in their book on the 'Nonunity of the Human Race,' ask, 'Whoever saw a negro with consumption?' If that question was submitted to you and me now, our answer would be 'yea, many of them '

"Finding nothing of interest in these old records on the subject, I propose to give you my own experience after an active professional life of fifty years Twenty years of my professional life was among the large plantations on the coast of Georgia, where I saw and prescribed annually for hundreds of negroes During these twenty years of practice, among all the negroes I prescribed for, I never saw but three cases of pronounced pulmonary tuberculosis

"During the war between the States I was stationed for some time at Andersonville I was assigned to duty with the Engineer's Department, where a large number of negroes were employed on the fortifications I had to register all the patients for whom I prescribed I registered several hundred, but not one case of consumption appeared on my register

"Why, then, is it that the negro, who was until a recent period, exempt in a great measure from consumption, is now the chief sufferer from that disease in the same climate where he was born and raised, and enjoyed an immunity therefrom In our cities which have become popular resorts for the consumptives the negro is the chief sufferer This is so with us, and it is so with all other consumptive resorts of which I have any knowledge Consumption among the negroes here commenced among the chambermaids, laundry-women, bell-boys, and waiters at our hotels and boarding-houses, where the consumptives spend the winter They contract the disease from the visiting consumptives, and have disseminated it through their kin and kith among our negro population I do not believe that consumption is a palpable contagion, but that it is a communicable disease I have no doubt I believe that it is to some extent a preventable disease "

From observation and investigation I am forced to believe that insanity and tuberculosis are first cousins, or at least closely allied The sudden outburst of insanity with the colored race of the South came associated with tuberculosis, hand in hand, keeping pace one with the other, hence, in obtaining histories of cases as they are brought to our institution the hereditary predisposition to consumption is carefully inquired into The prognosis of phthisical insanity is unfavorable I am not surprised at any time to find insanity in a family strongly predisposed to phthisis, and phthisis in a family strongly predisposed to insanity

Dr McKinnon, the first Medical Superintendent of the Royal Edinburgh Asylum, says, "that scrofulous and insane constitutions are nearly allied "

Insanity, in my judgment, is frequently a symptom of tuberculosis Tuberculosis is much more frequent with the insane than with the sane, and especially is this true with the colored insane I believe that more colored people die in our institution from consumption than in the entire county in which it is located While I have no statistics to sustain me, I am satisfied if I could obtain correct statistics from the county, it would bear me out in this statement In comparing the death rate in the Georgia Asylum between the whites and negroes, although the care and treatment is the same, the proportion of deaths from this disease is larger in the colored race, and I find the results are the same in other institutions where both races are treated I am fully satisfied that consumption is communicable, but it can not be entirely attributed to their surroundings in the institution, for a large number of them are brought to us in a tuberculous condition Does not the above clearly show the connection between tuberculosis and insanity? Esquirol says that "scrofula is one of the causes that predisposes to insanity " In my opinion, a large number of cases of marasmus that are recorded as the cause of death in asylums upon careful postmortem examinations tubercular deposits would be found

Dr Clouston of the Edinburgh Asylum says, "the general results to which my investigations have lead me are the following Phthisis pulmonalis is much more frequent as an assigned cause of death among the insane than among the general population Tubercular deposition is about twice as frequent in the bodies of those dying insane as in the sane Phthisis pulmonalis is the assigned cause of death in about one-half of those in whom tubercular depositions are found after death

Some near relatives of patients were insane in 28 per cent of the men and in 25 per cent of the women who were tubercular, while the percentage of hereditary predispositions among the admissions since 1840 had been 19 per cent of both males and females This may show that phthisis is most frequent among those with hereditary tendencies to insanity, or that insanity is apt to appear in more than one member of families with phthisical predisposition "

"When such expressions as exhaustion, general decay, natural decay and marasmus are put down as the cause of death in 10, 15 and in one as high as 60 per cent of the cases, we can not arrive at any correct idea of the true causes of mortality in asylums"

Consumption or lung diseases are the causes of death of 22 5 per cent of the males and 32 per cent of the females who have died in all the public asylums in Scotland for the last four years, according to the reports of the Commissioners in Lunacy In eight of the North American asylums the deaths from consumption amount to 27 per cent of the whole according to Dr Workman He says that "deaths from consumption in New York City are twice the rate per cent of any of the others except his own at Toronto," and says, "I am strongly inclined to the belief that the New York City asylum records have been based to a large extent upon postmortem evidences rather than antemortem suppositions"

The direct and indirect effects of syphilis is one of the leading factors in the causation of insanity with the colored race On some of the plantations where there are a great number of negroes, few of the adults are free from the taint of syphilis I have conferred with a number of physicians who were engaged in practice, before the war, on some of the large plantations, as to syphilis in that day They are fully agreed in the statement that secondary or tertiary syphilis was almost unknown with the country negro If one had syphilis the family physician was sent for, and the treatment was continued until the patient was pronounced fully cured The patient had to tell from whom it was contracted and if it was from a neighboring plantation the owner was notified, and that individual infected was subjected to the same treatment They were quarantined to prevent the spread of the disease and they dared not communicate it after it was known

The owners appreciated the great danger of delay and neglect of such a disease, and every precaution was taken to check it in the beginning The treatment of syphilis in this race now as a general thing is very unsatisfactory They are disposed to be treated first by some other negro, and it is seldom that they go to a physician before the secondary and tertiary stages, and then they will not carry out the directions If they have a physician in the early stages, as soon as the chancre heals the treatment generally stops, if not before Overcrowded sleeping apartments, neglect of personal cleanliness, poor and irregular nourishment are causes for the development of these diseases Before the war they ate from one-half to one pound of fat meat regularly every day and literally lived in the open air

I am indebted to Dr J C Patterson for the following information "Some fifteen years ago, while engaged in the general practice of medicine in the southwestern portion of the State, my attention was called to the ravages made by consumption among a settlement of negroes comprising about three or four hundred, who lived near together upon three adjacent plantations There is nothing in the location or surroundings to cause such a condition of things, but apparently everything that was conducive to health I made special investigation and inquiry as to the causes One of the plantations was owned by an old physician who had been the attending physician on all three of the plantations for thirty or forty years He was a gentleman of intelligence and of an investigating turn of mind, and had given considerable thought to the subject and from him I obtained the following facts Prior to the war they enjoyed remarkable mental and physical health, consumption, insanity and like wasting diseases were altogether unknown among them When the negroes were emancipated there were upon these three plantations, including children, between four and five hundred as healthy individuals as could be found, and free from all hereditary taint or tendency to any disease whatsoever The negroes as a rule remained on the plantations where they were born It was not long, however, before syphilis appeared among them, and it gradually spread over these plantations, the disease in nearly all cases going into the tertiary stage Some ten or fifteen years later consumption and insanity began among the adults, and many of their children died from scrofula and tuberculosis, and it was the exception rather than the rule that the children lived Bodily deformities and idiocy and other morbid conditions were very frequent among them

Alcoholic intemperance is another leading factor as a cause of insanity The ultimate results of alcoholic intemperance in this race are to be apprehended more than any other influence, from the fact that there is a tendency, not only on the part of the men to alcoholic intemperance, but also with many of the women Could we expect a perfect mental and physical organism from parents both of whom were drunkards? Legitimate results would be insanity, intemperance, depravity, crime, idiocy, epilepsy and various morbid conditions Persons addicted to alcoholic excesses are almost liable to transmit to their progeny a strong tendency to these defects as one who is himself subject to one or more of them

A distinguished alienist said, "that the children of intemperate parents are liable to become insane, intemperate, epileptic, and much more liable to be congenital imbeciles, is beyond dispute" I have long thought the worst effects of alcoholic intemperance is to be found visited upon the succeeding generation of drunken parents The fact that both parents are seldom drunkards is all that saves descendants from utter ruin

Blandford says that "if we could ascertain the statistics of insanity in other countries, civilized semi-civilized and barbarous, I think it probable that we should find insanity in proportion to the use of intoxicating liquors and substances' I do not think brain tension or [illegible] an[illegible] as to the care of their families in the f[illegible] as yet [illegible]anity among the n[illegible]

There are other factors in combination with the above, which I deem unnecessary to mention, that have had their influence in the conception and development of these highly insane and consumptive constitutions in this race, which are making them so liable to these maladies from slight exciting causes Too much liberty and freedom, so far as the laws of health are concerned, is dangerous to the mental and physical integrity of any people

DISCUSSION

Dr Campbell, Knoxville, Tenn —There has been a large increase in both consumption and insanity in the negro race since the Emancipation Proclamation, but not to the extent that Dr Powell suggests His paper is valuable in showing how the excellent care taken of the negro before the war induced his exemption from many diseases

Dr Powell says that in 1860 there were but forty four insane negroes in the State of Georgia I must question these statistics, and I think they can be accounted for We find in the asylums now a great many of what are called "defective classes" These are people who are not able to make their way in the world against strenuous competition, and who have become a nuisance in society Such people on the plantation, however, were not called insane, in fact, they made useful hands The very same endowed individual now is at Dr Powell's hospital

In reference to consumption, I have no doubt there has been a large increase, but I must question his statement that the negro race was comparatively immune before emancipation I have personal recollection that it was not so We all know that excellent hygienic surroundings, a regular and carefully selected diet, will do much in warding off consumption, and the one half to one pound of bacon that these negroes consumed every day was a most excellent prophylactic when the stomach was able to digest it

In the mountains of Tennessee there are many negro families that have died out since the war It was due to the lack of this bacon, the negroes were not nourished and they fell a prey to the ravages of tuberculosis

Acute miliary tuberculosis before the war was called "negro consumption," it had that name because whole plantations died off with it They would die in a few months after the disease was recognized

Dr D R Brower of Chicago—A few years ago I investigated this very subject I found that in Virginia before the war all insane negroes were gathered together in a small ward of one hospital They were a perfectly insignificant factor, fifteen or twenty was about the average number, and all the insane of Virginia among the negroes were there Now Virginia has in a large hospital, Petersburg, containing about 700 patients, at the time I made these investigations there were about 500 The patients in the Petersburg asylum were not the class of patients whom the Doctor has just spoken of as "defective" In Virginia the rule is very rigid, and all these patients *demanded* the care and custodianship of the insane hospital, so that so far as Virginia is concerned I am sure that the statistics of Georgia bears out Dr Powell in his conclusions It is a menace to the white population, this rapid increase of tuberculosis Some means must be devised by which the three great factors of insanity, tuberculosis, syphilis and alcohol, may be done away with If we could exterminate these three things, there would be but very little necessity of discussing the etiology of insanity Added to these is a fourth factor, that is, improper food

Dr Powell—While there was no good reason why the census report up to 1860, and even up to the present, should not have been correct, this is especially true of the census up to 1860 so far as Georgia is concerned, from the fact that there was no family pride existing to prevent the return of these data, but more especially from the fact that these negroes were *mere property*, and do you suppose that an individual would return his negro as sound—when he would be worth $1,400 or $1,500—if the negro was in fact unsound, or even if he was defective? It is natural for us to suppose that the census returns in that day, and under such circumstances, were correct

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THE PHYSIOLOGY OF DECUSSATION OF NERVES, A ONE SIDED BODY MEANS A ONE SIDED BRAIN

Read in the Section on Neurology and Medical Jurisprudence at the Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY GEO M KELLOGG, M D

CHICAGO ILL

The brain hemispheres are paired, and are as organically distinct as the two hands or eyes From all parts of the body surface pass in each lateral half of the spinal cord and in the cranial nerves the afferent or sensory nerves pass into each brain The motor or efferent nerves reversing this, pass from each brain to every muscle of the body These nerves are so many living conductors whereby that complex organism a living man or animal is made a unity To and from the spinal cord, also duplex, enter and emerge the nerves at each vertebral division The posterior relay ganglia mark the entrance of the sensory nerves, while the motor nerves emanate from the anterior portion of the cord on each side In each lateral half of the spinal cord these nerves pass up and down to join the medulla oblongata which also receives and gives off all but two of the cranial nerves It also receives the accessions of the three cerebellar peduncles A remarkable mechanism is here effected whereby the nerves decussate from the right to the left and from the left to the right, about 90 per cent crossing while 10 per cent pass direct By this arrangement *either* brain receives and gives off nerves to and from both sides of the body Above the pons the medulla oblongata divides into the crures These right and left peduncles (perfectly independent of each other) expand upward and outward and through rapid accession of substance expand in the substantia radiata, becoming the right and left cerebra The radiating nerves are the medullary substance which form the frame work and large interior mass of the paired cerebra The nerve fibers can be traced from below until they reach the cortex and connect with the nerve cells The cortex is about one tenth of an inch in thickness and forms the convoluted surface of the brain It is supposed our mentality has its seat therein It is more vascular than the medullary substance It is grayish, due to pigmentation of cells, granules and neuroglia A cross section shows it made up of five layers of cells and neuroglia These shade gradually into each other and are distinguished by the shape of cell constituents Nerve fibers pass vertically and transversely interweaving among the nerve cells Nerve cells are triangular pyramidal and fusiform, are nucleated and filled with granular matter into which the fibers project They are definite structures, do not increase in numbers from early life to advanced years, nor are they known to be reproduced when destroyed

The olfactory nerves have no connection with the medulla oblongata, but emanate directly from the olfactory bulbs beneath the frontal lobes, they are eighteen or twenty and pass directly through the underlying foramina of the cribriform plates, and melt away on the surface of the ethmoid cells and nasal passages generally The sense of smell being centrally placed and with no motor reactions its nerves do not decussate The optic nerve has no connection with the medulla oblongata It has, however an independent mode of decussation Its fibers unite and cross in the optic commissure Here also a notable portion of fibers pass direct to the optic tract of the same side Here we see the easily demonstrable type of decussation characterizing all sensory and motor nerves The great preponderance of nerves, 90 per cent, crossing in the medulla oblongata gives a pronounced and primitive inhibition power to either side This anatomic feature effects this remarkable result, namely, a *switching* off of one cerebrum in order that the other may rest It would appear that nature designed that either brain through its crossed and direct tracts should be able to control *temporarily* all sensory and motor manifestations on either side of the body We can not but suppose that this decussation structure is for temporarily holding one brain alone in action, just as is the case with the two eyes which perfect counterparts as they are, we can hold one or both eyes in use with the same result upon the sensorium The two eyes are functioned by habit to joint action, hence they are perfectly ambidextrous

The question of habit is a large one It has been defined as the tendency of acts or movements of living beings to be repeated Certain nerves to and from a group of muscles control them, at first unequally but after many efforts the muscles are compelled to act in unison At last in the effort of adjusting to harmonious action, a muscular movement first clumsy and slow becomes almost automatic, each detail of the movement is as if it were obliterated We can not say each nerve conductor does not act separately though we say usually the action is instantaneous However, we realize from experiment that the time element does come in and can be measured by delicate instruments A certain less and less moiety of duration in all rapid conjoined movements is apparent We also know the action is not strictly automatic, since if one or more of the nerves of the group is cut between the brain and muscle, the action is destroyed as certainly as though a wire was cut in a complex system of telegraphy Habit begins with the first action till it becomes most confirmed and with each successive act becomes easier and more rapid The effect of habit is especially seen in the successive or simultaneous action of voluntary muscles, which are united in motion as in writing In these muscular associations if an impulse is started, it runs through a long list of words, etc, without fresh impulse The adroitness of handling the pen in continued motion is a matter of, education and habit The musician affords a striking example in the development of the finger movement The muscles of vocalization are so much under the control of association habit that were it not for this no one could learn to speak The power of habit is shown in the association of ideas We speak of habits of drunkenness, swearing, lying and of every modification of speech or thought, habits of industry, order, idleness, vanity, cheerfulness and melancholly, we are called " bundles of habits " Set a boy at a new lesson, his countenance, skin, pulse, demeanor, are much disturbed, as from great physical exertion, this disappears as he is familiarized with the process

Habit also instead of increasing sensation lessens it We habitually come to disregard our clothes after a while as well as sounds, though at first conscious of them every minute Thus habitual motions become changed from volitional to so-called secondary-automatic actions, as in walking and speech The action of the vocal muscles is preceded by sensation, idea and volition, but after speech is acquired it becomes purely sensational or ideagenous, easy and as it were automatic Habit, first the offspring of volition, seems to become its successor Repetition of volitional impulses, however, give increased force to the related centers of motion, because these centers become active Many ideas, as the ego and non ego, have a natural tendency to conjoin, as the existence of one involves the other But ideas casually clustered and linked together by the mechanism of volition will at last as strongly coalesce The force of habit thus compares with instinct, and education vies with intuition, and habit becomes second nature Habits once acquired are not easily discontinued, they are grooves in which the mind is accustomed to move The great importance of habit is perceived to be economy of time Through rapidity of muscular action a complete unity of our complex animal organization is effected The tendency to form ruts or habits in the nervous system becomes the potent cause of one-sided action of body and brain At last, actions, the result of education, become second nature This is seen in the great right and left sided deftness, which becomes permanent and assumes an undue importance in the vital economy It is sometimes the left side, but generally the right It might as well be both sides

Our body is built of paired limbs, paired muscles, paired nerves and organs, alike in form, structure and function, being simply counterparts like the eyes, ears hands and feet, the only difference being the reversals necessitated by opposite sides of the body

All mammals are made up of such paired parts, alike in function and strength In man alone we find the exception of a difference of the two sides in strength dexterity and usefulness, though none in form, make-up and function

How has this great difference originated? A heredity of ages has had no effect in changing the form of limbs, hands, muscles and nerves of the two sides But how great the difference in strength, dexterity and usefulness in the two hands and arms! I contend it does not arise from nature or necessity, but is simply a human contrivance or convention established in the infancy of the race, and kept up by habit arising alone from the tyranny of an antiquated if not foolish custom A child is born weak helpless, without an instinct, it is dropped into the loving hands of parents, who enter at once upon its care, sustenance and training, teaching it by its external senses, organs, muscles and nerves to pass through those marvelous, though simple processes, the result of which is the education of hands, feet, eyes and all the special senses The nervous system is an infinite congeries of conductors from all parts of the skin, from all internal structures to terminate in each brain, which in turn becomes the storehouse and place of record of all sensations resulting in memory, where all associations and ideas arise and are preserved in the cerebral tablet, so much more wonderful than Edison's The brain itself is trained in turn to exercise itself in comparing sensations and ideas and in directing movements, and at length in the practice of the royal prerogative of reason, judgment and will

A fair and perfect mechanism is committed to human care Henceforth nature may be said to cease, for man begins A primitive idea of nature means all outside of man

Perhaps it is useless to inquire why the ordinary right-sidedness of body became established among us I can only suggest that it originated in the early days, when fighting with each other was the chief occupation and duty among men The wearing of the shield on the left arm and the wielding of the club, spear or sword in the right hand became established and the resulting effect has persisted ever since The repeated appearance of left-handed persons is against the presumption of right-handedness being an institution of nature Biblical history says that soldiers of the tribe of Benjamin were left-handed and thereby became expert "slingers and mighty men of war" The Carr tribe clan of Scotland are also said to have been uniformly left-handed Notwithstanding the knowledge of the oft-repeated supremacy of the left hand and side, yet the thought of ambidexterity is a recent suggestion The attempt to establish it has been made only in late childhood or early manhood This, however, seems too late to effect any satisfactory results Still the partial success among artisans and others, in effecting moderate ambidexterity is promising, and evidences what may be hoped for when it becomes general It is hardly possible to estimate the advantages which would ensue by securing to the race the equal use of the right and left hands An increase in the labor capacity, especially in the skilled crafts, would doubtless equal a third, not only from the coincident use of two strong hands, but from the respite afforded to nervous and muscular energy of either hand in use It would obviate writer's cramp and other fatigues contingent upon continuous use, and relieve the great disability arising from injuries or disease of the practiced hand I have seen many cases of partial ambidexterity among mechanics, and the accomplishment was regarded by them as of much importance I have seen but one case of perfect ambidexterity The late Dr Alex Mott of New York, could use equally well either hand in writing or in the most delicate operations and in nice dissecting He was for years one of the most skillful operators in New York When he was a child his father, the celebrated Valentine Mott, said, "My boy must succeed me in my business I shall see to it that he has two good hands instead of one like his father" The training was a complete success in securing a two-handed deftness which was a marvel to all on-lookers It is stated that Dr Pancoast of Philadelphia was also a perfect ambidexter It is extraordinary how few are known to have been so in past history Homer's Iliad describes the warrior Asteropæus as throwing a spear with each hand at once Also some of David's men-at-arms could use both hands Leonardo da Vinci and Michael Angelo are known to have been perfect ambidexters Leonardo da Vinci was not only a distinguished sculptor and painter, but an eminent machinist, engineer, architect and inventor It is remarkable that these two great men, on account of this feature, are placed by our statistical and science gossip, Lombroso, among his mattoids or degenerates, who happen to share in the accomplishment of pickpockets The latter, from neglected training or from obvious professional reasons, in the ratio of ten or eleven in a hundred are ambidextrous or at least left-handed Each of these men, Leonardo da Vinci and Michael Angelo, lived to vigorous old age and were distinguished by fine physique as well as marvelous ability

Physiologists admit that it is through the far and wide ramifications of the nervous system and the definite distribution of nerves and mode of conduction established, that habits are initiated and become confirmed, whereby second nature becomes the rule and first nature the exception This may be seen in the many deftnesses of hand or foot secured by long practice We know that novel coördinations of muscles, feats of strength and legerdemain are compassed by gymnasts and sleight of-hand performers which seem preternatural, but become easy of execution In course of time, too, movements at first special or occasional become overmastering, persistent and habitual and usurp an undue place in the vital economy It is so with the right side, it might as well be the left, or it might be both sides It seems to me anatomy distinctly points to this as the natural consummation The only practical way to insure ambidexterity is to begin in infancy and keep up the effort through youth, while the body habits are being established through the nervous system

My contention concerns not merely the physical training of the muscles and limbs I believe that the brain is affected far more than the rest of the body by by our one sided training Within the past year I have had charge of a case of brain softening which involved the whole of the right crus or peduncle of right brain In the postmortem it was found that all sound nerve fibers went entirely to the left cerebrum The convolutions or cortex of both brains were sound The pons, medulla oblongata and spinal cord were healthy There was considerable thickening of the dura in places and a more or less atheromatous condition of the large cerebral vessels In this case there was no paralysis The special senses were all good There was some loss of directive power of the eye, the right branch of the third pair of nerves being involved at its origin The great failure seemed to be in will power and in a general indisposition to cerebrate The patient could by suggestion perform all ordinary movements His reasoning powers were normal, but he would fail in successive acts of cerebration His word memory was good but he tired easily in putting words together as in writing He recognized people, always calling them by name Rising from a chair he would often stand timidly, uncertain in stepping, but by a word he would step off freely By slight impulses, given by hand direction on upper part of the spine he would move off briskly round and about and up stairs, being guided as a horse by a bridle Acts to which he was long accustomed, such as eating or smoking, he performed without suggestion and very well He indicated in many ways the strength and persistency of established habits This case proves that a man can think and act without help from the right cerebrum, and has been to me a crucial case

My study of several cases of aphasia a number of years ago almost established the view above expressed, but I was long led to imagine that the right brain was responsible for what we call unconscious cerebration Aphasia is characterized by loss of language and originates from cortex lesions in the third left frontal convolution At first in aphasia words fail, but the patient may recognize words addressed to him The power of writing words is lost early My dissections corroborated fully the determinations of Broca, who discovered the pathologic fact in 1861 Since that time, by more than a thousand cases, it is confirmed that in all right-handed aphasics the disease is located in the left cerebrum It has been further observed that in all left-handed patients the softened area is in the third right frontal gyrus The question invariably arises in these postmortems Why does not the healthy right brain carry on the power of speech when the other brain is diseased? Is it not because the right brain by decussation of nerves in the medulla oblongata is preponderantly connected with the left side of the body, and is thus by habit untrained to action? The result of left-handedness is that the right brain becomes master But the great majority of men are right-handed, the left brain has been elected in early life as the master of cerebration It follows as a corollary that were both sides of the body trained exactly alike the two brains would be functional to coincident as well as separate action just as is the case with the two eyes Among musicians, whose nervous systems are greatly exercised and strained by their calling, aphasia or amusia is common Here the area across the Sylvian fissure from the third left frontal is involved The musician becomes dumb to music, instrumental or vocal, showing that his musical ideas or expression powers are stored in the left cerebrum, provided he is a right-handed musician Though the pianist and the violinist use their left hand much, it is mostly as an accompaniment He hardly ever attempts instrumental music until after the fifth or sixth year, when certainly the one-sided body habit has been fully initiated, and as we have stated, where one cerebrum has been functioned to control, it commands both sides of the body or the motor and sensory nerves of both hands just as it does the bilateral nerves and muscles of the vocal apparatus, as seen in common aphasia

I have never seen any attempt to explain the *raison d'être* of decussation of nerves In the case of right-handedness established in childhood this switching off of the right hemisphere is made permanent by habit, and the left brain is functioned or elected as the entire master of ceremonies, whereby it becomes the storehouse of all memories and associations, the home of will and ultimately of all thought The plan which nature through anatomy established whereby the two brains should be perfectly complementary to each other, is defeated by the custom of right-handedness After the decussation of the nerves in the medulla oblongata there is an accession of crossed nerves from the pons and cerebellum, from these sources the motor and sensory filaments unite with the spinal cord fibers to form every sensory and motor nerve on both sides of the body The use of decussation becomes thus of no further importance, after a one-sided body is formed The decussation of the optic nerves is kept up in function, however, through the perfect cooperation of the eyes, one retina supplements the other All the special senses must become in time functioned to the left cerebrum, owing to this establishment of supremacy by habit The celebrated case of Professor Lourdet of Montpellier, a prominent lecturer of the French medical faculty, is both significant and convincing He was struck by aphasia and lost all power of speaking or writing his mother tongue After a while he found that by putting letters and words together he was able by degrees to relearn his own language Thus beginning as a child, in course of time he taught himself by functioning his right brain again to write and speak This has been repeated since after traumatic injuries of left brain involving the third left frontal convolution, especially in young subjects The right brain has been gradually trained to the exercise of verbal memory and thus a modified cure is effected

Miss A of Cleveland, Ohio, was deprived of sight by amaurosis She was an accomplished young woman, with fine memory and conversational powers Her blindness continued several years, but her mental faculties seemed to increase with her infirmities She was killed suddenly by a fall A postmortem revealed a bony tumor springing from the orbital plates which embraced the optic commissure The tumor had grown to the size of a man's hand and lay in the right cerebral fossa It had effected a general atrophy of the right cerebrum There were no failures during the growth of this tumor of any cerebral powers This case shows that one cerebrum may be thrown entirely out of action by disease, as we consider it can be by habit

Andral's case is significant A man 28 years of age, died with atrophy of the right cerebrum A large cyst occupied the entire field of the right cerebrum, in which was not a trace of cerebral matter save a portion of the basal ganglia This person took a fairly good education and used it to good purpose "His memory was excellent, his manners fine, his understanding was above mediocrity" Cruveilhier gives two instances where but one hemisphere existed yet there was bilateral action of sight and hearing as well as of all body muscles

Lattemand describes a person of normal psychic constitution in whom the right cerebrum was found displaced by a cyst filled with serum

The corpus callosum is a broad band of white medullary matter which passes from one side of the brain to the other, it is generally looked upon as commissural This band completely roofs the lateral ventricles, arching over the great brain ganglia, with which it is more or less intimately connected There have been several cases where three-fourths of this structure have been destroyed by softening and still no particular disturbance of mental or sensational powers were noted It is also sometimes absent Bruce collects fifteen cases of entire absence of corpus callosum On the whole, he is inclined to reject the idea of the coordination of the two hemispheres thereby The other commissures, the anterior, middle and posterior, are small and two of these have been known to be absent with little or no disturbance of coördination The medullary fibers in the medulla oblongata and pons cross and interweave from side to side and seem exactly adapted to effect coincident action of the two hemispheres Yet from the pressure of a notable portion of fibers, called the direct tract (uncrossed), which, uniting with largely preponderating crossed fibers, do enable each hemisphere to act independently, which independent power designed for temporary use becomes permanent by habit, and so all the commissural arrangements are made of little or no account

There is no physiologic reason why the two cerebra should not act coincidently and in perfect harmony as do the two eyes, or by the switching off apparatus, viz, the decussation, which gives the primitive inhibitive function either cerebrum might respite the other by acting alone Moreover the free commissural connection would permit the counterpart areas to keep together in their record of memories and sensations Thus we contend that one brain is unfunctioned inevitably It needs no discussion to show that were one eye shut off from coincident action with the other for three or four years, the two eyes would never be able to act together Indeed, I have known a life-long infirmity to follow a few months' separation of the eyes So, if our cerebrum is functioned to act alone in singing, speaking, etc , it would become permanently divorced, or one cerebrum would be for life made master of cerebration

"Man thinks because he speaks," says Leopold Noiré "No language without reason," says Max Müller If man thinks because he speaks, more often he speaks because he thinks Language is the outcome of mentality, in particular of memories, comparisons and associations All sciences, all philosophies, all religions even, find their entire expression in language, as all art, all experience, all poetry, the ideal and the real, find their interpretation here How can the physiologist think of language as a single motor function like striking or kicking Language is the voice of the mind concerning external nature, the body and all its members, and reports to us of our innermost consciousness Its seat is where all our mental attributes are clustered and in easy reach

When the right brain has been switched off from all direction by habit, it is only occasionally, by years of training it can be brought into action If the two brains were trained to joint action, exact counterparts as they are in form and purpose, our understanding or mental power would be greatly increased If the aggregate of our mentality be not increased, there would surely result greater accuracy in our recollections and less likelihood of our forgetting, as we would then have two places of record Beside, the brain commissures would be brought into free use between the cerebra, greatly to reinforce the accuracy of the mind in all its functions and adding much to the facilities of cerebration What causes the great differences among minds is unknown The volume of brain has been with reason considered important At least this will be doubled if our contention is well founded Certainly the wear and tear and susceptibility to disease and injury must be greatly increased by single cerebration The strong proclivity to insanity might be obviated by joint action and the needed respite which one brain would afford the other The tendency to monomania would be diminished and the evils of brain softening become far less common If left-sided cerebration is brought about by the right sided training of the body, how important that this ancient foolish custom should cease "Custom only can alter and overcome nature," says Bacon

Infants under my observation show little or no preference for the use of either hand When a young child is laid on his back his legs and arms are always thrown out in every way, one side as much as the other I have often seen mothers slap the baby's left hand or tie it up to the back to discourage its use The result is then sure, that the right hand is put forward in all movements, also in judgments of matters of sensation, of weight and pressure, of the roughness and smoothness of bodies, of degrees of heat and cold The right hand only is trained to strike with hammer or club It only is practiced in throwing a ball or stone It is indispensable that all these practices should be shared by the two hands through infancy and childhood in order to effect the desired result In early childhood all these primitive sensations and movements leave their impressions on record in the left cerebrum with right-side training, this being continuous, must surely produce a permanent effect Physiologists are agreed that the systematic use of the voluntary muscles must have great influence in the development of the brain It is through muscular movements that we acquire through touch our ideas of matter, of the *me* and the *not me*, of time and space, much reinforced through the eyes and other sense organs The very germs of volition are found in movements Conscious movements are the source of pleasure and pain, which we recognize as germinal also in mental life

With respect to the muscular system it is undoubtedly true that a prolonged non-use of a part leads to atrophy This does not hold true of the eyes or the nervous system In many cases of cataract, etc , which have continued for many years, when operated upon by removal of crystalline lens, the vision is restored, showing the normal susceptibility of the retina is in no manner degenerated Though the right brain may be unfunctioned from infancy, its nutrition is kept and certain nerve tracts, when irritated or injured, must respond by left side symptoms and paralyses This could hardly be different, for the nerve conductors are all there, nor are they destroyed by non-use There is no good reason to suppose that brain tissue increases by exercise The irritation or injury of cortex is one thing, and its responsiveness to the trained nerves from below is quite another The right brain may be irresponsive to normal peripheral, muscular and cutaneous stimulation, yet show left sided convulsions and paralyses by clots, embolisms or traumatic injuries The right brain, though disfunctioned by habit, is still well nourished, and could perform its duties if its property of stimulation by nerves from below were not switched off Injuries to the right brain by clots, embolisms, fractures, etc , are recovered from far more promptly than the same injuries to the left brain The peripheral nerves pass to and from every part of the surface and every muscle to end in each cerebrum These conductors pass side by side in the spinal cord and up through the medulla oblongata Those from the right side cluster and pass into the left peduncle Reinforced by the direct fibers, they spread out radiatingly to form the medullary substance The nerves from the left side pursue the same course to form the right cerebrum These radiating fibers form the body and framework of each brain They sustain at their apices the cortex or surface gray matter with its manifold convolutions This blanketing investment in which all our memories and sensations are stored, is comparable to the electric tension of the Leyden jar This gray matter is a continuous layer, it dips down between the convolutions forming the sulci and returns on the other side of each sulcus to spread over the adjacent convolutions These sulci carry and support the nutrient vessels, at the same time greatly increasing the surface The convolutions have also what are called tangential fibers passing from one to another and to more distant areas The crures, the legs of the hemispheres, may be well likened to the trunk of a tree whose expanding foliage is like the surface gray matter into which the nerves project Indeed, the nervous system may be well called "the tree of life," its roots are the sensory, motor and organic nerves of the body The culminating blossom and leafage is cerebration — the highest attribute of organized being The circulation of blood through the brain is remarkable It is estimated that one fifth of the blood is continuously passing through it Four large arteries enter the cranium through rigid, tortuous channels, by which the *vis a tergo* of the heart is much diminished Again, these arteries at the base of the brain turn to a horizontal direction in the circle of Willis, whereby their oppositely directed currents serve to neutralize their momentum, that the delicate brain tissue may not be so readily lacerated The greatest peculiarity of the brain circulation is, that from surfaces of contact the arterioles are given off parallel or in brush-like pencils to the various areas, and not in branches and subbranches, nor do they inosculate as the small vessels do in other tissues When an embolism or clot forms in these vessels, the special area supplied ceases to be nourished and becomes the ready seat of brain softening The most notable supply is through the great Sylvian artery, penetrating deeply into the brain and supplying each side of the fissure This part of the brain being so well nourished, is especially adapted for the location of those early established functions of speaking and hearing and the mental associations therewith connected The discovery of the speech center led to a great impulse among the evolution physiologists, to discover other faculty centers, and now we have the brain surface dotted over with figures Although bullets, and even a tamping bar, have crashed through human brains, yet recoveries have ensued with much loss of brain substance Still this wonderful material would patch up its rents indifferently, and the patient would recover nearly if not all his mental powers This indicates that other parts do take up the parts of lost areas I can not insist too strongly that the motor and sensory system, through the hand, establishes the primary relation with the brain and its functions It is very significant that in Dr Edward Seguin's study of the training of imbeciles, he found that the training of the idiotic hand led first and most surely and expeditiously to the development of the mental habit whereby he was able to secure results hitherto deemed impossible

Anatomists and physiologists have vied with each other in their expressions of admiration for the dainty and perfect structure of the human hand It has been the text of a famous treatise as evidencing design in creation The far away wonders of the firmament of the solar system and the stellar universe have evoked no higher and more sincere expressions of wonder Its exquisite adaptation to simple physical ends, its responsiveness to mind has been a promise of the present in all the past, and is a prophecy of all future civilizations No wonder the hand has been, with some philosophers, a most complete measure of the soul and its capacities Why should there be, through human perverseness, but one hand instead of two? If language can be called the exponent of the mind, as truly so is the hand in the triumphs of art and in all mechanical industries, its responsiveness to intellect in the building and decoration of homes can be alone matched by its answering touch to the calls of benevolence, friendship and love Let no one marvel that the hand should lead the mind through all the mazes of childhood to the heights and depths of life The hand is as truly the organ of the mind as is the brain What greater promise of improvement can be afforded than by two perfect hands and a double brain, healthfully responsive each to each through those exquisite conductors, the nerves?

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TREATMENT OF LUPUS VULGARIS BY MEANS OF ELECTROLYSIS

Read in the Section on Dermatology and Syphilography, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

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As the *causa proxima* of lupus vulgaris has been established beyond any doubt to be the tubercle bacillus, and the intimate process to be a local tuberculosis of the skin, of necessity the question arises, whether we are able to destroy the tubercle bacillus by constitutional remedies What, for a while seemed to be a certainty, remains still as a hope of the dermatologist Several cases of lupus vulgaris have been referred to as completely cured by the Koch's tuberculin injection,[1] but impartial criticism and experience has failed to prove the so much desired assertion Dr A Carruccio, at the last international medical congress in Rome, referred to twelve cases of lupus vulgaris treated with tuberculin injections in the clinic of Prof C Manassici The minimum dose was 35 milligrams and the maximum 459 milligrams in twenty-seven injections In every case the local reaction was apparent in swelling, redness, serous exudation, falling of the scabs, softening of the nodules, ulceration or necrosis of the same, erythema on the scars and new lupus eruptions General symptoms were also apparent in every case as chill, headache, increased temperature, thirst, sleeplessness, pain in the muscles and joints, heat of the whole body, nausea, sometimes vomiting, abdominal pains, increased pulse and respiration and copious sweating In three cases, after many injections no result was obtained, so the patients were curetted and then cauterized with nitrate of silver In some cases there was some improvement, but soon relapse occurred In two cases the disease became much worse The conclusion of the author is that the improvement was permanent only in those cases where local treatment was applied in combination with the tuberculin injections I have seen unfortunate cases of lupus vulgaris, where tuberculin injections have been applied to the number of 200 and yet the lupus process inexorably continued its destructive work It was therefore necessary to return to the old principles of treatment of lupus vulgaris, which have given good results in the hands of our teachers and in our own hand

The old classic treatment of lupus does not ignore the general system Cod liver oil is given in abundance, syrup of iodid of iron, phosphorus, creosote, hypophosphites, etc , are administered according to the peculiarities and to the indications of the case, not with the view of improving lupus locally but to improve the general system of the patient Tuberculin can be used as treatment for the general system if found indicated, but I would not use it with the intention of curing a case of lupus The attention of the dermatologist is therefore called to the local lesion and his object is first to destroy the nodules of lupous tissue, and second to obtain a soft and regular scar without injuring the esthetics of the physiognomy

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[1] Report of a case of lupus vulgaris treated with Koch's tuberculin Loomis and Fuller Journal Cut and Genito Urinary Diseases 1891

To obtain the first purpose the surgeon will say that he can accomplish it in a moment with the scalpel He takes off the affected skin, and then grafts with new, and without much trouble the case of lupus has in a few weeks been fully cured Dr E Senger,[2] in Krefeld, advocated this method, claiming the complete destruction of the lupus-affected skin I have under treatment a case of lupus vulgaris where a piece of skin one inch square had been removed from his forehead and grafts applied The grafting had taken with good results, but all around the edge of the grafting new lupus nodules are again developing I feel very much opposed to this kind of aggressive treatment, which I must refer to as a kind of surgical mania that every affection must be cured with a surgical operation After having in the generality of cases discarded excision of the diseased skin, we find numerous methods of destroying the lupus nodules which can be referred to the curette, or to the caustics The lupus tissue is so soft and friable that it can be easily removed with the curette The resistance of the healthy skin indicates when to stop, as the curette does not scrape nor penetrate the healthy tissues In cases of extended lupus ulcerations, with deep and thick infiltrations and large lupous nodules, the curette is the most speedy and satisfactory instrument for treatment

In other cases when the lupus nodules lie deep in the derma and are small and scattered, the curette can not be of as much benefit as in the cases above mentioned Here the linear or punctiform scarifications are indicated The idea is to produce necrosis of the lupus tissue by cutting through the blood vessels which supply nourishment to the infiltrating cells L Brocq[3] recommended the linear scarification, followed by application of the galvano-cautery and dressing with a sublimate solution, completing the treament with cauterizations with nitrate of silver The attention of the dermatologist has always been called to the possibility of producing necrosis of the lupus tissue, and as simple scarification was found insufficient for the purpose so as to help its action by means of caustics Auspitz and Schiff recommended that the point of the scarifier be moistened in some caustic solution, as iodin, chlorid of zinc or carbolic acid as to place in the middle of the lupus tissue a drop of the solution Instruments were made for this purpose But as the lupus tissue is soft and friable we can easily destroy the nodule by means of caustics, especially the stick of nitrate of silver, which can be easily inserted into the tissues

When we discuss treatment we do not find difficulty in destroying lupus infiltration, but when we treat the patient we find many obstacles which we would never have foreseen And for this reason we can not follow the same method of treatment in every case and often in the same case we must use different methods to bring about recovery I wish, however, to mention electrolysis in lupus, which is not esteemed to the full extent of its merits Indeed, the physician wishes to see a palpable effect from his application, and as the galvano-cautery produces a sudden destruction of the lupus nodules and the electrolysis shows little immediate change, we find the electro-cautery preferred to electrolysis In speaking of the thermo-cautery of Paquelin, Unna[4] said that it must compete with the sharp spoon, and the scarification with salycylic and pyrogallic acid In the electrolysis we have the scarification and a true and perfect disorganization of the tubercular tissue without the pain and destruction caused by other means

We do not use any cauterizing action of the galvanic battery, but only that peculiar physio-chemic action of dissolution of the elements caused by the cathode on the organic tissues According to the theory of Grotthüs, electrolysis consists of a series of decompositions and recombinations, and of a direct transfer of the elementary atoms from one pole to the opposite The quantities of the substances which are thus decomposed will agree with the quantities of their chemic equivalents, but not with their atomic weights, for every eighteen parts of water decomposed, two parts of hydrogen will be freed and sixteen parts of oxygen, the combining equivalents of water molecules being in the ratio of one to eight The action on the animal tissues is apparent at the negative electrode, which, when applied on the moistened skin, produces signs of local inflammation, swelling, redness, vesication and edema When the current passes through the tissues with a negative electro-needle, a certain amount of water will collect around it This may be considered due to a secondary formation, from the combination of hydrogen and oxygen the result of decomposition of the organic compound This electro-chemic action is not limited to the place touched by the needle, but extends to a larger area The tissue becomes white, swollen, slightly edematous, forming gradually, an eschara, which is detached in the form of a crust after some ten or twelve days When the tissues are vascular the destruction is greater and more rapidly accomplished, the blood is coagulated, the blood vessels are cut through, and the infiltrating tissue remains without nutrient supply

A weak current, applied through a needle, in a hypertrophied tissue, will have more effect if continued for a long time, than an intense current for a short time Moreover the weak current will not cause any inflammation in the tissues, but will induce a destructive metabolism

A few months ago a young lady affected with lupus of the face came under my treatment Miss A B, age 22, a blonde, with sallow and freckled complexion, blue iris, scanty hair, extremely sensitive and nervous, Her general health has been fairly good Lupus began around the nose when she was 10 years old, and gradually extended to the cheeks, lips and on the nose When she first came under treatment she was very emaciated, pale and had a slight cough The examination of the chest did not reveal any infiltration of the lungs Lupus nodules from the size of a pin head to that of a hempseed were scattered on the nose, causing it to appear red and thickly infiltrated Both nostrils were infiltrated and swollen, completely closed and covered with thick crusts The septum was equally swollen thick and infiltrated, the infiltration extending toward the lips, which were equally thick Numerous nodules from the size of a pin head to that of a split pea, were scattered all over the cheeks A large lupus nodule was on the edge of the superior lip, causing swelling of that part The patient had received fifteen or twenty injections of tuberculin without any result The nodules had been several times cauterized and scraped, but always with unsatisfactory results, and all this had made her so nervous that she would scarcely allow a close examination

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[2] Berlin Klin Wochenschrift No 31

[3] Journal of Cutan and Genito urinary Diseases July, 1888

[4] Monatshefte für Pract Dermatologie Band ix, No 9

Internally she began to take cod liver oil and syrup ferri iodati, locally a salve was prescribed containing acid salicylic gr xx, creosote gtt xxx, vaselin ℥i This was applied on a piece of lint twice a day As the nostrils were completely closed with lupus tissue, I deemed it better to use the curette and remove the flabby hypertrophic tissue This was easily done very much to the relief of the patient The thick swelling of the lips, and all the small lupous nodules, on the nose and cheeks were not easily curetted, especially on account of the excitability of the patient I had already used electrolysis with satisfactory results in cases of different growths of the skin, and I thought to try it in the lupus nodules It is well known, that altered tissues and lupus tissue offer much less resistence to the electrolysis than a healthy one, so that currents of small intensity will be sufficient to disorganize the lupus tissue, without injuring the healthy one I used a galvanic battery limiting the power of the current from twelve to fifteen milliamperes The active pole is the negative or the cathode, and the positive anodes is only passive, therefore the needle is attached to the negative and the sponge to the positive which the patient takes in her hands The needle is inserted into the lupus nodule as deep as it can go The tissue swells, serum flows out, forming around the needle and gradually the affected point becomes white in appearance The pain produced is very little and in case of too much sensitiveness it can be diminished by local application of ethylchlorid or applying a 5 per cent solution of cocain to the ulcerated surface, or by local anesthesia with the method of Scheink

The needle is left in the lupus nodule for one minute or longer, as I prefer a relatively strong current of 15 or 20 milliamperes continued for one minute to a too mild current of 5 or 6 milliamperes prolonged from five to ten minutes The electrolytic action is not limited around the needle, but it extends to the whole nodule For this reason I consider an ordinary needle to be sufficient, and the multiple needle electrode of Prof Lange should be used only in exceptional cases The idea of the application of electrolysis in lupus vulgaris is nothing new, as G T Jackson[5] referred to six cases of this disease treated by this method with encouraging results Gardner and Lustgarten had already reported in the *Medicinische Wochenschrift* of Vienna on the treatment of lupus by electrolysis with the flat electrode They, however, were using an electrode in the form of a button, which was applied on the surface, while Jackson used the needle inserted in the lupus nodule Kaposi too mentions the use of the electrolysis in lupus vulgaris, referring to the experience of Groh, Behrend, Gardner and Lustgarten, but it seems without personal experience

Recently, at the last International Medical Congress, held in Rome, Dr A Santi of Berne, " Contribuzione alla studio dell'Eletrolisi nella Dermatologia'[6] recommends very highly the use of electrolysis in lupus vulgaris He had applied it often in those cases where nests of lupus tissue are concealed in the scars, or in the healthy tissue and can not be reached by other methods He refers to the case of a man affected for over twenty years, treated by different physicians and specialists with various methods, but without benefit Santi treated him by electrolysis and obtained brilliant results

The applications were repeated every three days, for the reason that the lupus nodules were very numerous and she could not endure a long sitting Therefore it took a long time to destroy all the nodules If electrolysis causes pain it is not lasting and the operation can be repeated the following day without any objection from the patient In the application of electrolysis the diminution of the infiltration in the tissues is remarkable The nostrils and the upper lip were hard, swollen and thickly infiltrated The electrolysis was applied, taking care to place the needle into the lupus nodules by the help of a magnifying glass, the following day the swelling had decreased considerably over the whole surface

What we obtain by means of electrolysis in lupus is the destruction of the lupus tissue, without burning or destroying, by a mild hystochemic action which removes the fluid contained in the cells of infiltration and causes a disorganization of its hystologic elements The nodule is changed in its hard eschar, which is gradually detached from the healthy tissues and leaves a small and scarcely perceptible scar Its action is not injurious to the healthy tissues, which are not affected by the mild current, but is expended on the tissue of infiltration The needle inserted into the tubercle of lupus acts similarly to scarification, cutting through the blood vessels, which bring the nutrition to the cells, with the advantage of coagulating the blood The scarifications have been recommended by L Brocq[7] in the treatment of lupus vulgaris, followed by the cauterization with the galvano-cautery In electrolysis we have combined the scarification and the galvano-cautery, without causing great pain to the patient, and therefore can be repeated, as the patient will not refuse a second treatment should it be necessary Unna[8] expressed his opinion on the application of the Paquelin cautery, saying that in lupus it must compete with the sharp spoon, the scarification and the application of salicylic and pyrogallic acid In my opinion, the actual cautery not only destroys the lupus, but also affects the healthy tissues, causes a deeper scar and although applied under local anesthesia, is looked upon with horror by the patient, who will not submit to its application a second time

In conclusion, the local treatment of lupus vulgaris has in view the destruction of the nodule, which is done either by surgical means, scraping, burning, scarifying, or by chemic action, as by applications of lysol, pyrogallol, salicylic acid, sublimate, chlorid of zinc, etc The methods are often combined Unna,[9] for instance, introduces a scarifier into the lupus nodule and then sticks in a wooden plug covered with cotton saturated with a solution of 1 part sublimate, 4 parts carbolic acid and 20 parts of alcohol, which is left in place for ten minutes Good results are reported from this method and no doubt when we have destroyed the infiltrating cells we obtain recovery from lupus In my opinion, the treatment of lupus must be subordinated to the individual case, and according to it the method is chosen Electrolysis gives good results in lupus, but on a large ulcerated surface the curette is to be preferred On the contrary, on a swollen surface, from the aggregation of several lupus nodules, the application of the electric needle causes in a few hours the disappearance of the swelling Electrolysis acts very gently, destroying the tubercle by the combination of scarification with its hystochemic action In cases of lupus where small tubercles are scattered, especially on the face, I find it the preferable method It leaves a small and scarcely perceptible scar, I use a salve consisting of salicylic acid, grains 20, creosote, drops 30 in 1 ounce of vaselin, with this application the crusts fall off and the tubercles show plainly as whitish points Each of the tubercles are then treated with electrolysis, continuing the application of the salve When the necrosed tissue has sloughed off and the granulation commences the sites of the tubercles are touched every alternate day with a 5 per cent solution of nitrate of silver, covering the surface with a salve of zinc, or boric acid, until recovery

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[5] Journal of Cutaneous and Genito urinary Diseases November 1890

[6] Atti dell XI Congresso Medico Internationale Vol v

[7] Journal of Cut and Genito-urin Diseases July 1888

[8] Monatshefte für pract Dermatologie, Band ix No 9

[9] Monatshefte für pract Dermatologie, Band ix p 2

With this method I obtained perfect success in five weeks in the case under consideration Two more cases are at present under treatment with similar results, showing that electrolysis is to be considered as a most valuable agent in the treatment of lupus vulgaris

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A CASE OF SYPHILIS IN A YOUNG GIRL, PROBABLY ACQUIRED FROM HER MOTHER

Read in the Section on Dermatology and Syphilography, at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

BY HENRY A PULSFORD, M D

SOUTH ORANGE N J

I M, came to me in November, 1893, to be treated for a large ulcer on the front of the left leg She was then an undersized, sallow-skinned girl of 13 years, who had not menstruated The ulcer, situated just external to the crest of the tibia, four or five inches below the patella, was fully two inches in diameter and had all the characteristics of a broken down gumma The bone was not affected At the same time there was found upon the left labium majus a suspicious group of superficial ulcerating papules Except for a slight general enlargement of the lymph nodes there were no traces of previous syphilitic lesions At the time, no satisfactory history of the case could be obtained Under the combined influence of mercury and iodid of potassium the ulcer healed rapidly and the genital lesions disappeared

In the course of the two years following, the patient again came under my care first for a subacute periostitis of the lower extremity of one tibia, then for a similar affection of the other, and finally for a gumma, probably subperiosteal of the vertical portion of the frontal bone All of these manifestations rapidly disappeared under treatment, their appearance being separated by comparatively long periods of good health Since the disappearance of the last lesion, some six months ago, the girl has improved wonderfully in her general condition having added several inches to her height, become plump, lost her sallow color and began to menstruate

Notwithstanding the absence of the classical confirmatory signs, I at first considered the case as one of hereditary syphilis The history, however, seems to make it probable that the disease was acquired in childhood

The father of the girl is perfectly healthy, denies all venereal diseases, and has no evidences of syphilis The mother was healthy at the time of the patient's birth, two years before which time she bore her first child, a healthy girl now alive and well One healthy child born two years later died in infancy There is no history of abortions or miscarriages The patient in early childhood was perfectly healthy photographs of the two children and the testimony of intelligent observers proving that up to the age of 4 or 5 years the younger child was as robust and almost as well developed as her older sister About this time the mother began to be loose in her sexual habits, becoming estranged from her husband in consequence Soon after this she contracted syphilis The disease was neglected in its early stages, and probably was not recognized until four or five years later, when she entered the Orange Memorial Hospital for treatment of severe tertiary lesions A year or two later she died The failure in the child's health began about the time her mother acquired the disease, and although I could get no satisfactory evidence of an initial lesion or of early eruptions, the child was so thoroughly neglected at that time that such manifestations might easily have escaped attention At the age of 7 or 8 years she suffered from an ulcerated sore throat which was called diphtheria, but might very well have been either the primary lesion of the disease, or a severe angina accompanying one of the early eruptions

In conclusion, then, the facts that the father escaped infection, that three apparently healthy children were born at intervals of about two years, and that there were no abortions or miscarriages, seem to prove that the mother could not have been syphilitic during the uterine life of the patient, while there is every reason to conclude that she was infected some five years later That the child was infected probably by her mother, but possibly by one of her mother's paramours, is by no means satisfactorily proved, but taking into consideration the woman's ignorance, her neglect of her own disease, and the dissolute life she was leading at the time, it is less incredible that one child contracted syphilis than that the other was so fortunate as to have escaped infection

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DO GRAPE SEEDS CAUSE APPENDICITIS?

BY EDMUND ANDREWS, M D

CHICAGO

The laity of Chicago have become infected with the idea that grapes are a dangerous fruit They have received from some of our best physicians an opinion that grape seeds cause many, or perhaps nearly all of the cases of appendicitis occuring among us, and the occasional discovery of a seed in or near a perforated appendix adds to the alarm

Nearly all the grapes consumed in this city are eaten in the months of August, September, October and November If they cause any large number of cases of appendicitis, we would expect that disease to be most frequent during the grape eating season, or at least within a reasonable period after its close

To settle this question, I have obtained statistics of the disease in Chicago for every month during the last fourteen years My friend, Mr Tracy H Clark, a medical student, has been kind enough to examine the records of Mercy Hospital, of the County Hospital and of the City Health Office, and to tabulate the results

Some difficulty was at first encountered in consequence of conflicting terms used by different recorders to designate the same disease, but by the exercise of some care it was found entirely possible to correct these errors

The cases of appendicitis thus collected number 3,709, and appear in the following table

Table showing 3 709 cases of appendicitis occurring in Chicago during fourteen years arranged by months Taken from the records of [illegible] Hospital of Cook County Hospital, and of the City Health Office

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1882	9	[illegible]	11	10	8	11	8	12	[illegible]	9	7	11	110
[illegible]	14	10	9	11	17	1	[illegible]	2		1	[illegible]	[illegible]	112
[illegible]	[illegible]	9	11	[illegible]	[illegible]	1	11	11	12	12	[illegible]	10	[illegible]
[illegible]	12	[illegible]	7	[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	11	[illegible]	1	[illegible]
[illegible]	11	12	[illegible]	[illegible]		11	1	[illegible]	1	[illegible]	11	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		14	12	1	[illegible]	[illegible]	[illegible]	12	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	21	14	[illegible]	[illegible]	1	[illegible]	[illegible]	11	[illegible]	11	211
[illegible]		[illegible]	[illegible]	11	[illegible]	[illegible]	12	[illegible]	11	11	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Statistics of this class do not afford [illegible]

[illegible]

from catarrh of the canal and from other irritation A few writers, however, believe in the frequent influence of foreign bodies. The following list of opinions shows the conflicting character of professional thought on the subject.

Helferich of Greifswald, says that catarrhal inflammation is the usual cause of the disease, and that foreign bodies do not ordinarily have anything to do with it.

Fowler holds a similar opinion. He reports [illegible] laparotomies of which only two showed any true foreign bodies.

White of Philadelphia, thinks appendicitis is caused by the organ being a "functionless structure of low vitality."

Pilliet of Paris, on the other hand, finds by microscopic study, that it is rich in glandular structure, which in a state of inflammation resembles that observed in follicular pharyngitis.

J. C. Lange of Pittsburg, thinks the disease arises from catarrhal inflammation, and not from foreign bodies

[illegible] typhoid infection [illegible] that of perforating typhoid ulcers [illegible]

[illegible]

THERAPY OF VERATRUM VIRIDE

Read before the Pennsylvania State Medical Society 1896

BY JOHN M BATTEN, M D

PITTSBURGH PA

Veratrum viride slows the heart's action and makes it more feeble It was first used by Magendie and Andral in physiologic experiments in 1821 Meisner first discovered it in the seeds of veratrum sabadilla in 1818 Bardsley first used it in rheumatism and dropsy in 1826 The curative effect of veratrum viride lies in its influence on the heart to retard its action in acute inflammatory diseases wherein the pulsation is very much accelerated I have been able to produce the physiologic effects of the drug in cases of inflammatory diseases with a dose of Norwood's tincture not larger than three drops every three hours By this dose I have been enabled to reduce the pulse beat twenty or thirty in a minute, especially when the high pulse rate has been caused by inflammation In inflammatory rheumatism I have had good results with this drug by keeping the pulse at or near normal until convalescence began In the early stages of measles, scarlet fever, and in some cases of smallpox, it acts favorably in governing the heart's action In typhoid fever where the heart's action is irregular, I have thought that this drug in one drop doses aided in steadying it For this purpose I have in the treatment of typhoid fever continued the drug in one drop doses until convalescence set in In all acute inflammatory diseases of the chest it is an excellent remedy, in acute pneumonia, pleuro-pneumonia and pleurisy If in acute pneumonia the pulse can be kept at or near normal by this drug in the stage of congestion, we may often be able to jugulate it or prevent it from entering upon the hepatized stage Even in a sthenic case in the second stage veratrum viride acts well The heart's action is lessened without loss of blood as in venesection

"Should we Bleed or not Bleed in Acute Pneumonia?" was the title of a paper read by a gentleman before the AMERICAN MEDICAL ASSOCIATION at its session held in Milwaukee, Wis, in 1893 In the discussion of the paper opinions were diverse One gentleman advocated veratrum viride in the treatment of acute pneumonia He had such entire confidence in the treatment of the disease with this drug by keeping the pulse at or near normal, that he made the bold assertion that all cases could be jugulated, or cut short, by this mode of treatment

Feb 27, 1896, I attended William McC, male, aged 46 The disease (pneumonia) was about entering the second stage, both lungs were involved The pulse was 82, temperature 102 degrees, respiration 32 The expectoration bloody mucus I prescribed veratrum viride, three drops every three hours February 28 expectoration rusty, mixed with blood, temperature 101 5 degrees, respiration 30, pulse 80 I prescribed in addition to veratrum viride, gr 1 40 of nitrate of strychnia every eight hours February 29, temperature 99 degrees, respiration 28 pulse 79 Sputa less rusty March 1, pulse 78, temperature 99 5 degrees, expectoration rusty After this during the course of the disease, etc neither the pulse nor temperature rose above normal On March 5 the rusty sputa disappeared On the 16th patient was sitting up in bed, and made rapid convalescence

In the same house, on March 12, I attended a male aged 66, entering the second stage of typhoid pneumonia, both lungs were involved Tongue thickly covered with a brown coat, red around the border delirious, temperature 103 degrees, respiration 30, pulse 109 rusty sputa I treated him in the same manner as the former patient till the evening of March 15, when he had an attack of heart failure I withdrew the veratrum viride and substituted whisky, continuing the strychnia From this time, during the course of the disease, the pulse did not rise above 90 The respirations for four days after that of my first visit were 36, 35, 35 and 38 respectively, then receded gradually March 20 it was 30, and in a few days down to 19 The pulse became gradually slower, and March 22 it was below normal The patient had convalesced April 6

The heart failure of the second case was caused by the cumulative effect of the veratrum viride It is my opinion that the failure of the heart acted favorably on the course of the disease, as the turning point seemed to be established at this time In both of the cases I enveloped the chest in oil silk jackets

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RE-INFECTION IN CONSUMPTION

Read before the Mississippi Valley Medical Association St Paul Sept 16 1896

BY JOSEPH MUIR, M D

SENIOR PHYSICIAN TO THE NEW YORK THROAT AND LUNG HOSPITAL
NEW YORK

That but a comparatively small percentage of consumptives actually succumb to a first attack of tuberculosis has been time and again demonstrated through necroscopic examinations The question is no longer an open one As a matter of statistics, indeed, not only is a first attack not fatal, but a large proportion of patients recover from it and their subsequent death is found to be due to causes disconnected with any pulmonary lesions If that is so—if under reasonably auspicious circumstances there is a strong probability of a cure being effected where the lesion is yet in its initial stages then to what cause or causes are subsequent relapses to be attributed?

The ordinary received idea of the re-development of the tubercle can not certainly explain all or even the major part of the phenomena, for in a large number of cases the bacilli are, by postmortem examinations, found to have been utterly discharged from the body There must, therefore, be some other explanation, and the following considerations are offered, not to announce an established certainty, but to suggest a theory that may serve to reconcile many of the seemingly inconsistent cases which the practitioner encounters in his daily practice

In the first place, there can be no serious dispute that in the vast majority of instances primary infection is owing, not to inherited tendencies but to external conditions Were this not so, the influence of environment on turberculous conditions would not be so palpable and important as it is

Among the rich, where the luxuries of exceptional food and frequent change of air are always accessible very few cases of consumption prove intractable The advantages which they enjoy are so far sufficient to immunize the lung tissue against further attack, that a life time may pass without any advance being made by the virus Frequently, indeed, a permanent cure is affected

But among the poor the case is very different The incessant struggle for life demands their presence in the dust-laden atmosphere of labor, in the badly ventilated sweat-shops, in the imperfectly drained tenements, in the closely packed, squalid quarters of poverty Every breath they draw, almost every particle of food they eat, contributes a little to the poison that renders the tubercle bacilli the dread of civilization It is there, in these disease-laden districts, that primary infection takes place

Then in most cases, comes a period of comparative comfort at a hospital The patient enjoys good food and fresh air, and the ravages of the dread destroyer are temporarily stayed Perhaps, indeed, the bacilli have been permanently expelled

But what then? Consumption differs from other infectious diseases, such as smallpox for instance, in that the former, unlike the latter, does not immunize the sufferer from further attacks On the contrary, the primary lesion renders the patient peculiarly liable to fresh invasions The damaged lung has lost some of its elasticity and the natural fortresses against disease have been more or less weakened If then the unhealthy conditions above referred to were sufficient to infect a healthy lung, how much more likely are they to overcome a damaged one? The patient's return to the old life brings with it a return of the old disease, another sojourn at the hospital, another return to the dreary drudgery, again and again until the whole fatal story is told

This is the history of the consumptive Now it will be practically impossible to prove in any given case, that the progress of the disease is due, not to re-development, but to a process which I have more or less faintly demonstrated, called "re-infection" The very nature of the subject suggests the obstacles to such a concrete demonstration, because, whether death resulted from re-developmdnt or re-infection, the bacilli are nevertheless present in the lung to frustrate any further inquiries Still, as I have shown, if permanent cures are possible, and if patients discharged from hospitals as permanently cured, suffer sudden relapses on their return to the same conditions which were originally responsible for the first outbreak of the disease, the theory of re-infection in such cases is based certainly on substantial grounds

The so-called doctrine of re development is further inconsistent with the circumstance that patients, in order to secure a change of air, engage often in outdoor vocations exposed to the elements, frequently subsisting on indifferent and sometimes insufficient food What conditions more favorable to re-development than these? Yet, as a matter of common knowledge, these cases present the largest percentage of permanent cures

And the reason is extremely simple First, the change of air and labor harden and refresh the tissues so as to render re-attack less probable, and, second, the respiratory impurities are no longer present to supply the conditions necessary for the vitality of the bacilli These facts just noted can, it seems to me, be consistent only with the hypothesis of re-infection

It only remains to state a few precautions which may be exercised to prevent re-infection

1 A thorough disinfection of the premises occupied by patient

2 A destruction of the sputum, not so much to prevent infection to the other inmates of the house, as to preclude the possibility of re-infection on the part of the patient—to protect the patient, as it were, against himself

128 West Forty fifth Street

Vaginal and Uterine Septum —Beckmann describes in the *St Petersburg Med Woch* of October 17, the case of a patient who had a septum in both vagina and uterus, dividing the genitalia completely in two, but notwithstanding, bore a healthy child with an apparently normal delivery As the child was born the cervical septum was ruptured, and the vaginal pushed to one side with a slight tear

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THE DEGENERATE JAWS AND TEETH

Read in the Section on Neurology and Medical Jurisprudence at the Forty seventh Annual Meeting of American Medical Association held at Atlanta Ga May 5-8 1896

BY EUGENE S TALBOT, M D , D D S

FELLOW OF CHICAGO ACADEMY OF MEDICINE

(Continued from page 1140)

Crescent shaped bitubercular, tritubercular as well as all deformed teeth tend to the cone shape The malformation of these teeth results from pre-congenital trophic change in dentine development It consists in dwarfing and notching the cutting and grinding edges of the second set of teeth, a familiar example is the so called Hutchinson's teeth, usually referred to a syphilitic etiology Hutchinson's position has, however, been more strongly stated than his words justify since he admits that in at least one-tenth the cases luetic etiology could be excluded [8]

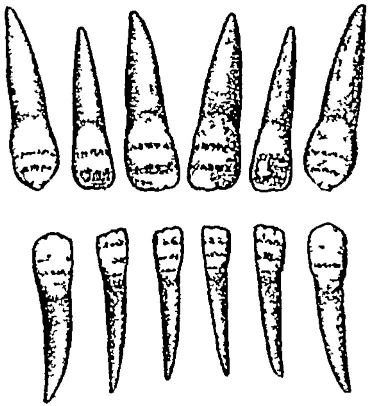

Figure 31

Lues only plays the part of a diathetic state profoundly affecting the maternal constitution at the time of dentine development While these teeth may be due to secondary result of lues, they do not demonstrate luetic heredity

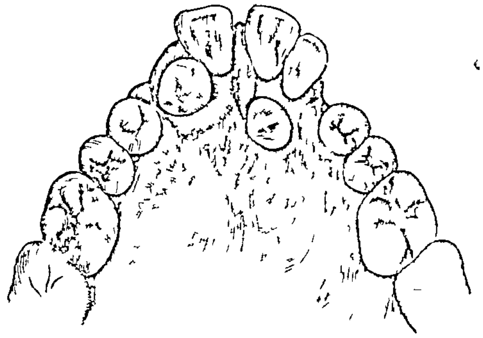

Figure 32

In Figure 31 are seen the teeth of an individual affected with constitutional disease and by referring to Figure 15 we shall see that the defective lines represent the respective ages of 2½, 4 and 5 years The degree of pitting will depend, as a rule, upon the severity of the constitutional disorder In the case just cited, however, although nutrition was but slightly disordered each tooth shows a tendency to conate Not infrequently are cavities extended completely through the tooth The cusps of the (permanent) first molars calcifying at the first year are usually attacked also and arrested in development, producing the cone shape These data together with dates of eruption of the temporary and permanent teeth, furnish an absolute basis for calculation as to excessive or arrested development of tissue Figure 32 shows a very degenerate jaw with cone-shaped malformed bicuspids The right lateral missing, the cuspids are erupting in the vault and the dental arch is assuming a V-shape The jaw as a whole is marked arrest in development Figure 33 shows "Hutchinson" teeth Were the first molars visible they would present marked contraction of the outer surface with a malformed center Referring again to Figure 15 we observe that trophic changes affected the system at the age of birth The outer surface exhibits a tendency to take the cone shape Figures 34, 35, 36, 37 and the molars in Figure 30 exhibit malformations, assume the cone shape and the center frequently associated with this type of teeth The coincidence in from between "Hutchinson" and malformed teeth and those of the chameleon, demonstrates that tropho-neurotic change produces atavistic teeth Figure 38 illustrates the tendency of human bicuspids (when there is no antagonism) to rotate one fourth round, thus again demonstrating the atavistic tendency toward the teeth of the chameleon Figure 39 exhibits extreme atavism all teeth anterior to the molars are cone shaped The third molars are missing and would probably never erupt In Figure 40 appears more marked atavism The upper and lower anterior are both cone-shaped and the superior first bicuspid exhibits tendency thereto The right superior second bicuspid, second and third molars, the right inferior first and second bicuspids, second and third molars are missing The same condition probably exists on the left side The space in the upper jaw is due to the insufficient width of the teeth Alternation of teeth in the upper and lower jaw is a reptilian feature

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[8] American System of Dentistry

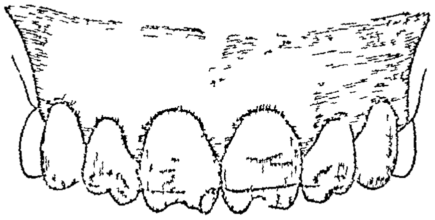
Figure 33

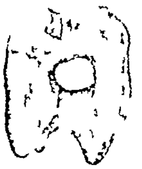
Figure 34

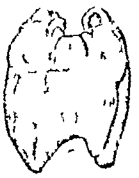
Figure 35

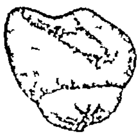
Figure 36

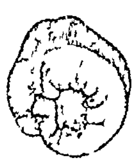
Figure 37

Figure 30 furnishes an excellent illustration of the principles hereinbefore advanced

In degenerate jaws the influence of the factors of the differentiation theory are also demonstrated Every tooth in the jaw at one point or another may display rudimentary cusps On the incisors they are always to be found on the lingual surface

Figure 41 illustrates the centrals with two rudimentary cusps, the laterals with one and the cuspids with one also Figure 42 represents cusps upon the lingual surfaces of the molars The cuspids are not unlike the lower bicuspids with a rudimentary lingual cusp

Thompson remarks That there is a gradation from central incisors toward the bicuspids in evolution This grading of form is not observed as we pass from the cuspid to the bicuspid in man But we must remember that the cuspid often presents a cingulum on the lingual face that inclines it toward the bicuspid forms in lower mammals like the mole and that the first premolar or bicuspid is then more caniniform, the inner tubercle being much reduced This inner tubercle is very variable and erratic as to its position It appears as far front as the centrals and is often present on the lingual face of the laterals of man The lingual tubercle is very constant on the first bicuspid of man and is well developed as the buccal But in some lower forms, as in the lemurs, it is quite deficient It attains the highest development only in the anthropoids and man Considering these stages of development, the grading from the cuspid to the bicuspid forms was more gradual in the earlier species than in the later, where the individual teeth have taken on special development[9]

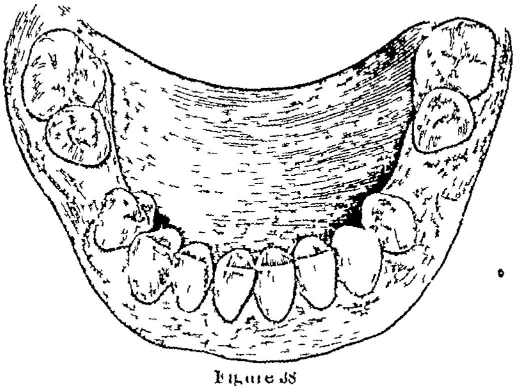
Figure 38

I have the skull of a degenerate girl who died from tuberculosis at 13 years Among other stigmata is a cusp on the external surface of a right inferior cuspid This is a decidedly strong point in favor of the differentiation theory Another strong point in favor of this theory is shown in Figure 43, where every tooth is present and a most remarkable display of cusps occurs The cusps upon the cutting and grinding edges are not obliterated Commencing with the left superior central incisor three cusps are present with a rudimentary palatine cusp The laterals also show three cusps, while the cuspid has two very distinct The first and second bicuspids have tubercular cusps, they being in line The buccal cusps upon the molars two to three and are still in position The palatine cusps are worn away The same is the case upon the opposite side except that the cuspid has cusps that have fused together leaving a small projection upon the mesial side and a rudimentary palatine cusp The cusp upon the third molar is lost In another case (Fig 25) the primitive cone teeth are seen trying to shape themselves into incisors The lateral incisors, cuspids and bicuspids are still cone-shaped The first permanent molar is fairly formed, while the second molars are still in a primitive condition Thus the points made by Osborn are nicely demonstrated in the two last illustrations, namely, the triangular-shaped crowns and the leveling of cusps

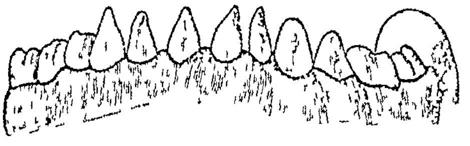
Figure 39

There is abundant evidence to show that degenerate teeth unite in twos, threes, fours and fives as indicated in the concrescent theory These single cone-shaped teeth grow together and form bicuspids and molars The germ of any two normal teeth may intermingle and unite, not only are the crowns found united with separate roots, but crowns and roots are united throughout

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[9] Dental Cosmos May, 1891

Figures 44 and 45 show two superior central and lateral incisors joined together throughout the entire length of crown and root, Figure 46, two lower incisors are united throughout Figure 47 shows a cuspid with two roots, Dr George T Carpenter of Chicago has a right superior second bicuspid with three well-formed roots, Figure 48 illustrates two bicuspids united at the crowns, Figure 49 shows two molars perfectly united, Figure 50 illustrates central and lateral incisors of the permanent set perfectly united, Figure 51 shows two molars united, Figure 52 a molar and supernumerary united, the supernumerary taking the cone shape with deformed center Figure 53 shows three malformed teeth, each conated and completely united

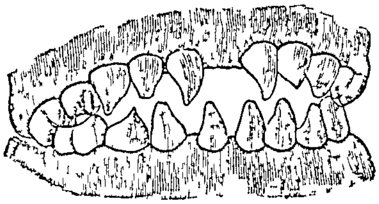
Figure 40

It is not uncommon to find three molars united together, as for instance the second, third and supernumerary molar Dr C V Rosser, Atlanta, Ga , has two small molars and a supernumerary cuspid perfectly united from crown to root and these three further united to the roots of a well formed molar Thus we see the concrescence theory is fully established

That human jaws, like the human ears, are degenerating is a matter susceptible of demonstration by actual measurements Mummery examined the skulls of 200 Britons and Roman soldiers in Hythe church, Kent, England He found the narrowest width 2 12 inches, the highest 2 62, with an average of 2 50 The width of jaws of 402 British soldiers to day is narrowest 1 88, widest 2 63, average 2 28 The highest width was very rare, only eight measured 2 50 The jaws of the mound builders compared with the existing cliff dwellers show similar results, the average width is about 2 50 inches This is also true of nearly pure negro races Measurements of normal jaws of 855 Italians of central Italy were, narrowest 1 88, widest 2 63, average 2 17 Measurements of normal jaws of 4,935 Americans gave the following results, narrowest 1 75, widest, only one case, 2 56, average 2 13 If in the highest type of physical man the width of the upper jaw from the outer surfaces of the first permanent molars near the gum margin was originally 2 50 inches in diameter, the jaw of people now living in the same locality is from 0 25 to 0 33 inches smaller, *although the jaw has been* growing smaller, since there are no breaks or deformities in the contour of the dental arch this must be regarded simply as an adaptation to environment and not degeneracy in the proper sense of the term The degeneracy of the jaws on which I would lay special stress are those in which deformity has resulted from inability to adjust structure to a changing environment When arrest of development so takes place that deformities of the dental arch results, the jaws vary from 2 inches to 1 inch in width As a rule the teeth are the same size to day they were 3,000 years ago This is due to the fact that their growth is ante-natal and not influenced by post-natal systemic changes The jaws do not contract as a result of mouth breathing, that erroneous but favorite hypothesis with so many dentists and laryngologists If the jaw can be arrested and be smaller in circumference than the teeth, a [illegible] takes place in the [illegible] arch

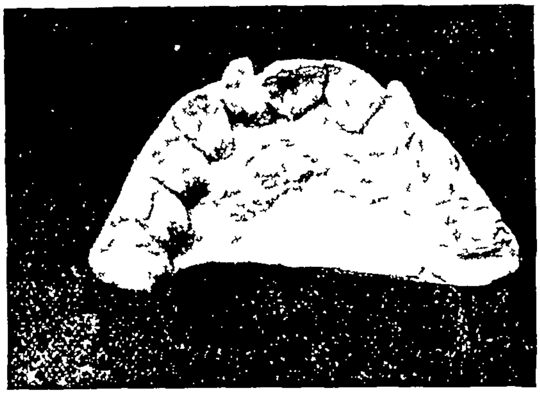
Figure 41

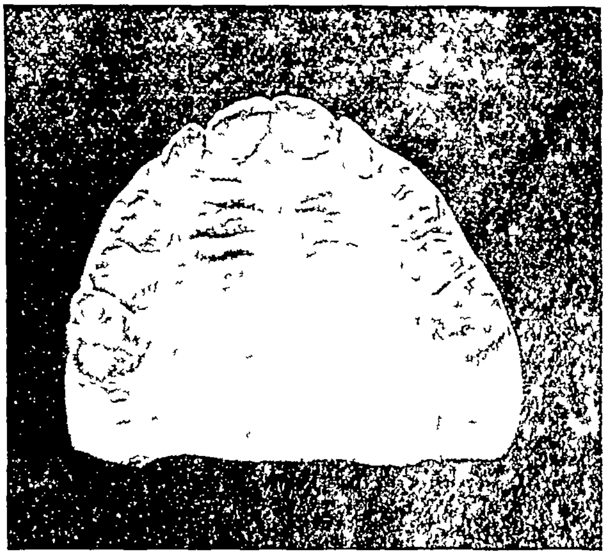
Figure 42

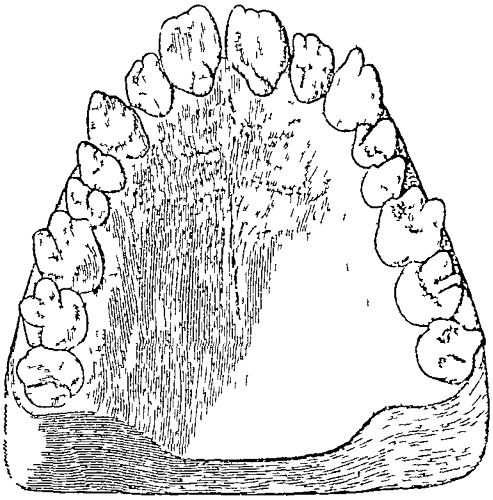
Figure 43

and deformity results Two types of deformity occur, the V-shaped arch and the saddle arch All other types of deformity not due to local causes are modifications of these two These deformities always occur with the second teeth only They are never seen before the sixth year, when the second set begin to erupt, and are complete with development of the second molars at twelve They may become more exaggerated later in life from want of room, the eruption of third molar and want of harmony in relation of the two jaws when closed

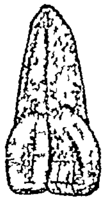
Figure 44

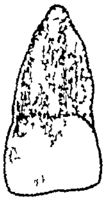
Figure 45

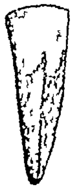
Figure 46

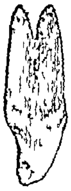
Figure 47

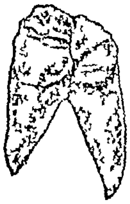
Figure 48

There are three characteristics of the normal arch Independent of temperamental peculiarities the line extending from one cuspid to the other should be an arch of a circle, not an ange or straight line, the lines from the cuspids to the third molar should be straight, curving neither in nor out, the sides not approximating parallel lines Absolute bilateral uniformity is not implied in this, as the two sides of the human jaw are rarely if ever wholly alike A uniform arch necessitates a uniformity of development between the arch of the maxilla and the arch of the teeth and a correct position of the indivdal teeth in their relation to each other When there is inharmony of development between the jaw and the teeth, as may happen when one parent has a small maxilla with correspondingly small teeth, and the other a large one with correspondingly large teeth, if the child inherits the jaw of one and the teeth of the other irregularities must follow

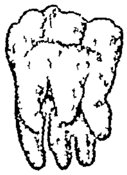
Figure 49

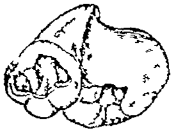
Figure 51

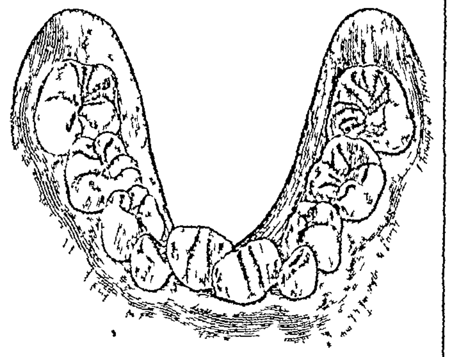
Figure 50

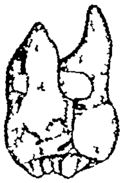
Figure 52

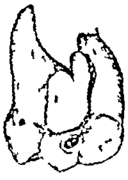
Figure 53

Such difference in diameter between the arch of the maxilla and that of the crowns of the teeth is a constitutional cause of irregularity Whenever there is a difference between these diameters the line formed by the teeth must either fall outside or within the arch of the maxilla and irregularities of arrangements result The primary divisions of irregularities are the V-shaped and saddle shaped arches We have the V-shaped variety (Fig 54)[10] (one of the typical forms), where the apex of a triangle is formed by the incisors, the base of the triangle being a line connecting the two first molars If, because of premature or tardy extraction, the first molar moves forward or the coincidence of the arch of the maxilla and the arch of the crowns of the teeth in trying to accommodate itself to the lesser arch of the maxilla, becomes a broken line forming an angle at the incisors This angle results from two causes the thinness of the process at this point and the diminution of resistance which must follow

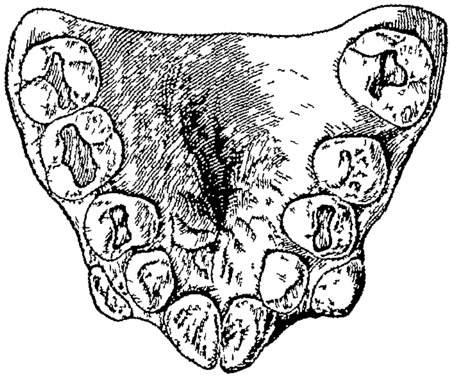
Figure 54

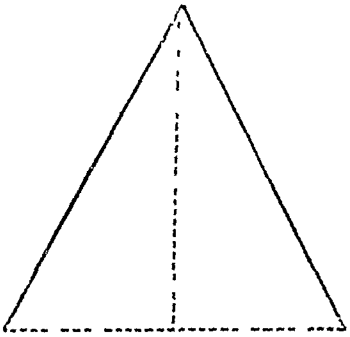
Figure 54

(To be continued)

SELECTIONS

Central Amblyopia an Early Symptom in Tumor of the Chiasm — Mr Nettleship, president of the London Ophthalmological Society, recently addressed that society in regard to ten cases seen by him in which failure of vision, at or near the center of the field in both eyes with little or no early ophthalmoscopic change, occurred in women Three of them turned out to be cases of ordinary tobacco amblyopia, and in one it seemed probable that alcohol was the cause Some five cases remained in which there was no reason to suspect a toxic cause and in which later events made it probable that some intracranial disease had caused the visual failure Three of these patients had died with cerebral symptoms and in the fourth a post mortem examination revealed a cystic tumor involving the chiasma, optic tracts and other parts at the base of the brain The loss of central field in the earlier stages was more abruptly defined and less constant in position than in tobacco amblyopia and the symmetry was less precise both in time and degree than in the latter disease In a later stage there was mental failure, loss of memory and irritability, with occasional head ache and varying paralysis of one or more ocular muscles The changes at the disc only amounted to pallor of the outer half until a late stage of the disease If these cases were seen at an advanced stage the visual field would often have the form of a temporal hemianopia more or less The case in which he had obtained a postmortem examination was that of a lady whose sight had failed while she was suckling her fourth baby She had a black spot before the left eye and later one before the right There was a central scotoma of oval shape beginning just outside the fixation point and extending about 20 degrees outward There was no peripheral loss of fields Her vision and mental condition got worse and she died after about three years At the postmortem examination the brain was a good deal flattened on both sides At the base there was a large membranous sac filled with fluid lying on the sella turcica and extending forward to the cribiform plate of the ethmoid The wall of the cyst was loosely attached to the hinder part of the frontal lobe, to the median part of the temporo sphenoidal lobe and to the hook of the uncinate convolution, it reached back as far as the middle of the pons The chiasma was incorporated in the front wall of the cyst, the right optic tract could be traced back to the pulvinar, the commissural fibers could be followed a short distance toward the other side, as also the fibers which pass to the cerebrum The left optic tract could not be found, it was so flattened as to be unrecognizable

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[10] While the general outlines of the jaw and teeth are the same, in no two cases are they exactly alike The cuts therefore are not drawn from actual cases but are ideal diagrams of typical cases

Dr Mark Akenside (1721 1770)—The *Medical Times*, London, July 18, treats of one of the great medical faculty of St Thomas's Hospital, Akenside, who was celebrated as a poet, philosopher and elegant scholar His manner was solemn and reserved, his temper was irritable, and, despite Lettsom's opinion to the contrary, yet benevolent Hardinge described his manner as most unfortunate "He looked as if he never could be understood" He was no wit, and being devoid of humor was impatient of jests His memory was powerful, his life "marked by a course of undeviating rectitude" His fame rests chiefly, however, on his poetical character His "Pleasures of the Imagination" has been called "the most beautiful didactic poem that ever adorned the English language," though Dr Johnson said he could not read it through Lettsom left a manuscript description of his teachers, and he speaks of Akenside as a most supercilious and unfeeling man "If the poor affrighted patients did not return a direct answer to his queries, he would often instantly discharge them from the hospital He evinced a particular disgust to females and generally treated them with harshness It was stated that this moroseness was occasioned by disappointment in love" Lettsom thus describes his personal appearance "One leg of Akenside was considerably shorter than the other, which was in some measure remedied by the aid of a false heel He had a pale, strumous countenance, but was always very neat and elegant in his dress He wore a large white wig and carried a long sword" Lettsom never knew him to spit, nor would he suffer any pupil to do so in his presence He would make patients precede him with brooms to clear the way and keep other patients from coming too close, and Richard Chester (a governor of St Thomas's) once seeing this ceremony, reproved him with the words "Know that thou art a servant of this charity" Akenside was once greatly incensed by one of his surgical colleagues, who disgusted with the poet's absurdities took what is vulgarly called "a good rise out of him" Akenside asked this gentleman, a Mr Baker, what he intended to do with one of his sons who was weak minded through epilepsy "I find he is not capable of making a surgeon so I have sent him to Edinburgh to make a physician of him," replied Baker, and Akenside refused to speak to him again for long after

Akenside belonged to a period when measured lines and stately verse were more admired than beauties of imagination and language gained greater admiration during his lifetime Keats suffered neglect but his fame as a poet is immortal Akenside on the contrary enjoyed his eminence while alive and is now well nigh forgotten

Akenside was born at Newcastle on Tyne, on November 9, 1721 His father was a Presbyterian and intended his son for the ministry but, like William Hunter, the mistress he preferred was medicine Entering as a pupil at Edinburgh in his nineteenth year Akenside remained there two years, becoming much distinguished for his oratorical powers at the meetings of the medical society From Edinburgh he migrated to Leyden, where after a stay of three years he took his degree of Doctor of Physic on May 16, 1744 His death took place in 1770

Calomel in Diphtheria—In the *American Therapist*, October, Dr Lawrence F Flick relates an experience in his own family which convinces him of the power of calomel over diphtheria Our space will not admit of a more complete recital of his experience than is given below, but there will be many practitioners who will find unusual interest in the full paper

All the children made a good recovery and were declared sterile within about ten days from the time the calomel treatment was begun In addition to the calomel, of which from a sixtieth to the hundredth part of a grain was given every fifteen minutes, night and day, large doses of strychnin, whisky and digitalis were given at short intervals This constituted the entire treatment All of the cases showed great pallor and much prostration, but these were the only symptoms that occurred throughout the duration of the disease which could indicate severity of attack Cleaning out of the nose and dusting with calomel constituted the local treatment

In the second youngest child a recrudescence of the nasal symptoms also took place after several days, with a rise of temperature and depression of heart action Although there was no nasal discharge, cleaning out revealed the presence of a small amount of purulent matter After thorough insufflation the temperature became normal and all the symptoms again subsided In both cases we now kept up the insufflations regularly and both rapidly advanced to recovery

Another surprising effect of the calomel and a further evidence of its power over the disease was its action upon the enlarged glands In the two youngest children the enlargement of the glands disappeared with the improvement of the nasal condition and this was as expected In the third child we did not recognize the nasal condition at first and we therefore did not use insufflation In her case the glands became exceedingly large and painful, and although we gave the calomel internally and applied a solution of europhen in oil externally there was apparently no amelioration in their condition Finally, reasoning from analogy from the other cases, we began insufflation and immediately the swollen glands decreased in size and in a few days were normal

As to the mode of action of the calomel when used in this way in the treatment of diphtheria I was at first inclined to think that it was by stimulation of cell action in the throat, but these recent experiences leave no doubt in my mind that it is by local germicidal action The frequent repetition of the dose keeps up a constant sterilization of the soil, and the smallness of the dose prevents evil constitutional effects of the calomel In no other way can be explained the failure of the action of the calomel upon the membrane of the nose when given by the mouth alone and its speedy action upon the nose when used by insufflation The phenomenal action of the calomel upon the membrane of the baby's ear points to the same conclusion

It was a matter of no little surprise to me to find that calomel was not absorbed by the nasal mucous membrane From four to five grains of calomel a day by insufflation produced no action upon the bowels so long as the occlusion of the nasal passages prevented the calomel from passing into the pharynx but as soon as insufflation was attended with the passage of the calomel into the throat, as could be determined by the cough set up by inspection of the throat, it was followed by purging

So far as my experience enables me to say anything about the size of the dose of the drug to be given by the mouth I think the best rule to follow is to give as much as can be taken without setting up constitutional effects I usually begin with a sixtieth of a grain and go up or down according to results If the bowels become loose I decrease the dose, and if they are constipated and I see no effect upon the local conditions in twelve hours I increase the dose There seems to be a remarkable tolerance of mercury in diphtheria and this seems to grow as the drug is given I have reason to believe that a tolerance for the drug is also established by the disease, for I have found it necessary to give larger doses in recrudescence of the disease than in the beginning of the attack

The drug can best be given rubbed up with sugar and should be placed dry on the tongue The secretions of the mouth will promptly distribute it over the pharynx While the child is asleep the powder can be placed inside of the lips without awakening it I have found no trouble in having the medicine administered every fifteen minutes, night and day, and I have in no case found it necessary to have the child's sleep disturbed

A Summary of Dr Waldemar Haffkine's Work Against Cholera —The following sketch of the life of the distinguished cholera expert has been compiled by Mr Ernest Hart, editor of the *British Medical Journal*

Waldemar Mordecai Wolff Haffkine comes of a respectable Jewish family, and was born at Odessa in South Russia, on March 15, 1860 At the age of 12 he entered the Gymnase of Berdiansk, and from the very first the bent of his mind was in the direction of science, and rested on a firm foundation of fact that could be tested by direct experiment This determined Haffkine's career In 1879 he entered the University of New Russia, which has its local habitation at Odessa, as a student in the Faculty of Science In 1883 he took his degree of Doctor of Science The path of Academic glory was, however, closed to him on account of his Jewish birth But although he could not hope for a professor's chair he remained in the University for five years working in a laboratory fitted up for his special use in connection with the Zoological Museum of the University of Odessa Haffkine fully justified the liberality of his patrons by the truthfulness of his work He grappled with difficult problems of the fundamental phenomena of organic life, and he opened up new and highly promising lines of original research

At the beginning of 1888 Haffkine was appointed assistant to Dr Schiff, professor of physiology in the University of Geneva, and about the middle of 1889 he found his true sphere of work in the Pasteur Institute of Paris In 1891 he had so far progressed that when Prince Damrouy, brother of the king of Siam, called on M Pasteur and asked him to supply a remedy for cholera, the illustrious scientist turned to Haffkine for aid A few months later Haffkine's first paper on the subject was given to the world

In 1892 M Pasteur applied to the Russian government for leave to test the method in the dominions of the Czar, where cholera was then raging, but the request was not acceded to M Pasteur next asked permission of the king of Siam, where no year passes without the whole country being invaded by the disease In the meantime, however, Lord Dufferin, the British Ambassador in Paris, had suggested that the place where the experiment could best be tried was the so called endemic area of Bengal Lord Dufferin, who during his brilliant career as Viceroy of India had always shown himself alive to the importance of what Carlyle called "the condition of the people question," took the liveliest interest in the matter, and urged it on the attention of the Secretary of State for India At the same time the Russian Ambassador to France and others commended Haffkine to the British government He began his operations in India in April, 1893, and continued vaccinating all sorts and conditions of men and women till the end of July, 1895 a period of twenty nine months During that time he vaccinated 294 British officers, 3,206 British soldiers, 6,629 native soldiers, 869 European civilians and 125 Eurasians The vaccinations were not in any way forced upon the people, no official pressure was brought to bear upon them, only those were inoculated who expressed a wish to be so Mr Haffkine's work was greatly facilitated by the fact that the principle of protective inoculation against infectious disease is claimed by the natives of India as a discovery of their own At Calcutta up to July 15, 1895, Mr Haffkine vaccinated 4,397 persons Opportunities for comparing the liability of cholera of vaccinated as compared with unvaccinated persons, living under precisely similar conditions, presented themselves in thirty six houses In these thirty six the total number of inmates was 521, of this number 181 were vaccinated and 340 were not Among the non vaccinated persons there were altogether 45 cases of cholera, of which 39 ended in death, among the vaccinated there were only 4 cases, all fatal These figures show that the non vaccinated persons were, roughly speaking, six times more liable to death than the vaccinated In these cases no allowance has been made for the time that has elapsed since the vaccination It is found, however that the full protective power of the vaccination does not manifest itself until about a week after the material has been introduced into the system If the figures are corrected in accordance with the fact, it is found that vaccinated persons are twenty times safer from attack and eighteen times securer from death than the unvaccinated One instance which particularly struck Dr W J Simpson, the distinguished health officer of Calcutta, was the following About the end of March, 1894, two fatal cases of cholera and two cases of choleric diarrhea occurred in Katan Bagan Bustee, in a population grouped around two tanks This outbreak led to the vaccination of 116 out of 200 persons in the Bustee After the performance of the vaccinations nine cases of cholera, of which seven were fatal, and one of choleric diarrhea, occurred in the Bustee All these cases occurred among the unvaccinated portion of the inhabitants, which formed the minority in the Bustee, only one of the vaccinated was affected Then, take the case of Gaya jail M Haffkine was invited to go there in 1894, and at a time when cholera had already broken out, six cases, five of them fatal, had occurred During the epidemic, which lasted a fortnight after his arrival, there were on an average 409 prisoners in the jail, of this number 207 were vaccinated and 202 were not Among the latter there were twenty cases of cholera with ten deaths, among the former there were eight, with five deaths Here again making the proper correction for lapse of time after the vaccinations, we find that during the last six days of the outbreak there were eight cases, with two deaths among the non vaccinated, and not a single case among the vaccinated

Enough has been said to show that there is already good evidence that Haffkine's vaccinations afford a very distinct measure of protection against cholera More than this, it would not be wise to say at present Haffkine himself, with that admirable reserve of judgment which is characteristic of the Pasteur school of investigation, does not claim that the efficacy of the method has been fully proved In the opinion of Professor Koch, however, the demonstration is already complete, and Dr Simpson is almost equally convinced One thing may certainly be taken as fully proved, and that is the absolute harmlessness of the vaccinations

Changes in the Cord in Pernicious Anemia —The *Lancet* for September 19 has the following extract from a paper on the above subject by Dr K Petren of Stockholm in a recent issue of the *Nordiskt Medicinskt Arkiv*, from which it would appear that the cord changes are far from uniform in this diseased condition Petren has examined the cords in nine cases of pernicious anemia In two of these there was clinic evidence of cord affection In four of the cases the vessels were found to be affected with hyalin degeneration, in five were found scattered throughout the cord small hemorrhages or patches of sclerosis which had been caused by hemorrhages In two cases in which no spinal symptoms were detected there was chronic degeneration of the posterior columns In the first of the two cases with spinal symptoms, that of a woman aged 36 years, these consisted in impairment of sensibility, ataxy and paresis of all extremities, especially the lower, loss of knee jerks and incontinence of urine Throughout the cord, except in the sacral region, there was degeneration of the posterior columns extending as high up as the medulla In the cervical and upper part of the dorsal cord there was complete degeneration of Goll's columns, in Burdach's columns there were patches of sclerosis more or less confluent, while in the lumbar region the whole posterior columns were similarly degenerated The second case was that of a man, 42 years of age, who had been troubled with weakness in the legs three years before Under treatment this passed off But two years later the weakness came on again and increased so that the patient was unable to walk, and before death there was evidence of pernicious anemia and of severe spastic paraplegia in the legs After death there was found marked degeneration of the posterior columns of the cord, most marked in the upper part and gradually lessening toward the lower end of the cord The lymph spaces round the vessels also were swollen and filled with granular bodies and detritus According to Petren there are usually in the cord in the case of pernicious anemia small hemorrhages which may lead to some sclerosis without clinic manifestations The vessels also not uncommonly have thickened walls In many cases, however, of pernicious anemia there is a true spinal cord affection which is not to be regarded as merely coincident

From the anatomic point of view no doubt differences are found in the affection of the spinal cord in different cases, but these differences are to be explained by the manner in which the process develops in different cases Petren is of the opinion that those cases, as regards the affection of the spinal cord make up a special group and that probably a toxic process underlies the affection of the spinal cord as well as of the blood

PRACTICAL NOTES

Athletics with Music for the Insane —Dr B H Mumby, formerly medical officer of health at Portsmouth, England, is now in charge of the Borough Asylum of the same locality He is a kind of sanitary superintendent of his charges, and one of the writers in *Public Health* (London) states that he has witnessed a cricket match between an eleven of the asylum's inmates and a team of outsiders, which augurs well for the excursive efforts of the new superintendent in the way of recreating his patients The asylum team acquitted itself right well, having a certain amount of encouragement in the strains of a full band, the instrumentalists of which were nearly all convalescents from among their own number

Statistics of Tertiary Syphilis —Besides the antimercurialists, there are two parties holding opposite views in regard to the treatment of syphilis Fournier is at the head of one with his chronic intermittent treatment administering mercury regularly to prevent the appearance of later and severer symptoms, even when all symptoms have apparently disappeared The others consider the excessive use of mercury injurious, and only administer it symptomatically In order to decide the question, Raff has been collecting statistics and urges others to continue the work It has been his experience so far that the majority of cases of tertiary syphilis had received no or very inadequate mercurial treatment in the early stages —*Cbl f Chir* November 7

Implanted Bones —A Barth describes in *Ziegler's Beiträge*, No 1, a series of experiments to determine the processes that occur when bones are implanted He used various animals, and sawed or trephined out a small piece of the skull or of some long bone, replacing it in five minutes, and then studying the healing processes of the wound He found that necrosis of the replaced fragment speedily ensued, while proliferation proceeded in the surrounding parts, first forming granulations and then osteoid tissue The sawdust and scraps of bone were taken up by the giant cells and gradually became merged in the osteoid tissue By the third week new bone had formed around the Haversian canals, until finally the new callus completely covered up the dead bone substance It seemed immaterial whether the periosteum was retained or not The only exception to these processes was in the case of very young animals, as in them the replanted bone retained its vitality to a certain extent The process was substantially the same whether macerated or calcined bone was implanted, or even pieces of sponge, ivory or bone charcoal The *Deutsch Med Woch* of October 20, remarks that Barth's results are more reliable than those obtained by his predecessors, as he used the microscope exclusively in his work

Castration and Ligating the Arteria Iliaca Interna for Hypertrophied Prostate —It seems that long before Ramm suggested castration as a means of relieving hypertrophied prostate, Professor Sinizin of Moscow had performed the operation, as he presented at the meeting of his surgical society in March, 1894, a patient whom he had treated with success in this way eight years before Derjushinsky mentions this fact, and adds to the 148 cases collected by Bruns, 15 more in Russian literature, four of them personal He considers this treatment preferable to all the former methods, stating that the indications for operating depend upon the residual urine, as long as this is slight, not over 150 0, it is best to wait But if it begins to increase, or catheterization is accompanied by pain and loss of blood, castration is indicated, except in cases of excessive weakness or severe renal affections He describes also a series of experiments on dogs, among them ligating the arteria iliaca interna on five dogs It was followed almost immediately by atrophy of the prostate gland, which progressed for five months, when probably collateral circulation was established, as the gland then began to grow again, and by the end of the eighth month had recovered its former size He thinks a similar experience would follow any attempt to carry out this suggestion of Bier's in cases of hypertrophied prostate —*Centralblatt f Chir*, November 7

Renal Surgery —Israel describes in the *Deutsch Med Woch* No 22, his experience with a case of stones in the left kidney, which he removed through a slit on the convex side, with a stone in a solitary cyst near by The space left by the stones was packed with gauze, until "the kidney gaped like an open oyster shell" The gaping edges were sutured to the abdominal wall and the inflamed lining of the pelvis of the kidney treated by local applications, with complete recovery Another case of surgical kidney, with hundreds of abscesses and enlarged kidney, resulting from a criminal abortion, with a recto vesico vaginal fistula and the severest general symptoms was also cured by extirpation of the diseased kidney In two cases he operated successfully for severe pyonephrosis complicating acute gonorrhea In another case in which the ureter turned abruptly upward and then downward, he performed a plastic operation, a sort of pyeloplicatio, with the result that not only the troubles in miction passed away, but the urine became clear and normal A similar plastic operation on a boy of 11 restored the valve at the orifice of the ureter in the kidney to normal functions Twelve cases of tubercular kidney were operated upon, with three cases of entire recovery and five much improved One patient died at the time, and three have since died with tubercular foci elsewhere In one case only part of one kidney was removed, and the amputated surface was bled for several minutes through a gauze pad pressed directly and firmly against it

New Treatment of Prolapsus Ani —Dr W B Platt in the *Johns Hopkins Hospital Bulletin*, July, offers the following as a modification of treatment of prolapsus by suture He says this method of treatment is not at all original with him He had operated on a child in vain by other methods He had twice employed linear cauterization, thus endeavoring to bring about adhesion between the bowel and the tissues, but without avail Dr Earle of Baltimore recommended an operation which Dr Kelly had suggested, and which completely cured the prolapse Not long ago this second patient entered the Garrett Hospital with an obstinate prolapse of the rectum, which projected about four inches below the body each time the child had a stool He did this operation, keeping the suture in for three weeks It was entirely successful He afterward learned that Dr Kelly has used this operation in the vagina in cases of prolapse of the uterus In the case of the anus the operation is as follows

"At the junction of the skin and mucous membrane, just beneath the latter, a curved needle is inserted in the median line below, and a silk thread is carried half way around the anus and out again, in the median line above, re inserted in the same opening and brought out at the first puncture, making a purse string suture The little finger is then put in the anus and the string tied snugly around it Apparently this would cause suppuration, and possibly a fistula It does nothing of the kind, nor does it cause any pain afterward The child has his stools in the recumbent position If the feces are at all hard, injections are given to soften them After three weeks the suture is withdrawn and the place kept clean, when it heals immediately with no return of the prolapsus By this method the bowel is kept in place long enough to contract adhesions, by the other methods it is difficult to keep the bowel from coming down after or during a stool. no pad in the world will keep it up in the case of a young child. Two weeks after the removal of the sutures in these two cases one could not tell that sutures had been used."

Fraenkel's Method of Narcosis and After-treatment of Laparotomies.—Before the operation the patient receives a subcutaneous injection of 1 to 1¼ c.cm. of the solution: Morph. mur. 0.15, atropin. sulf. 0.015, chloralhydrat. 0.25, aq. dest. 15.0. Fifteen minutes later this is followed by the chloroform or ether, and in all his thousands of cases, he has never had a death from chloroform, nor even a severe case of asphyxia, and subsequent inconveniences are scarcely ever observed. In the first and often in the second night also after laparotomy, the pain of the wound is arrested by an injection of the morphin-atropin solution above. The patients are not allowed to eat or drink anything whatever in the first twenty-four hours. The second day, they are given cold Russian tea, and are kept on fluid food until the third or fourth day, until the first evacuation of the bowels has been obtained with castor oil or calomel. If the vomiting keeps up after the second day it is almost always an indication of beginning ileus. He traced the ileus in one case to a loop of the small intestine which had been drawn into the drain scar. He usually applies the drain to arrest the hemorrhage, according to Mikulicz. He removes the sutures the eighth or ninth day. He never extirpates the uterus for carcinoma, except where there is a possibility of radical recovery. He prefers palliative methods where the peritoneum or vagina are involved; enucleation of the neoplasm, carbonization of the inflamed surfaces with the Paquelin, and after the scabs have fallen, cauterization of the surfaces of the wound with a solution of chlorid of zinc, 2 to 3. He has patients who have had no relapse since this treatment three years ago.—*Cbl. f. Chir.* November 7.

Cure of Carcinoma with Injections of Alcohol.—The remarkable results obtained by Hassel with injections of alcohol are described in the *Therap. Woch.*, of October 11 and 25. The alcohol favors sclerosis, cirrhosis and cicatrization in all growths like struma, angioma, cysts, lymphatic gland tumors, sarcoma, carcinoma and especially carcinoma of the breast and cervix uteri. In fifteen out of eighteen cases of carcinoma of the breast the growth gradually dwindled away, until in a year there was nothing left of it but the connective tissue stroma, and there has been no return. The three cases that were not benefited were relapses in the axilla of long standing. Five cases of carcinoma of the cervix also recovered completely and the patients are still living and in good health. The effect on the general health is even more surprising. The pains and uneasiness pass away, and sleep, appetite, assimilation and strength return in a most remarkable manner. He uses alcohol diluted one half, or even more with very sensitive patients, as he has found it less painful, while equally effective with the undiluted. He prefers a Windler syringe to a Pravaz, as the needle is longer by 4 cm. and reaches farther into the depths of the tissues. He makes one or at most two injections at a time, drawing the breast out and inserting the needle so that the alcohol will penetrate into the retromammary cellular tissue beyond the middle of the gland. The contents of the syringe should flow out gradually on gentle pressure of the piston; if there is resistance, he withdraws it a little and inserts the point sideways in another direction. In this way the retromammary space is filled with the alcohol, 5 to 10 c.cm. for small tumors and 10 to 20 c.cm. for larger ones. He is careful not to touch the rear wall of the tumor, but keep always well in the space behind it. After the needle is first introduced, he withdraws it to see if any blood flows out of the hole, showing that the needle had penetrated a blood vessel. If it has, he cleans the syringe and inserts it another place. The injections are made once or twice a week at first, and then later once in two or three weeks. The patients with carcinoma of the cervix were dispensary cases and received only six to twelve injections in all, extending over many weeks. A case of inoperable cancer of the rectum is also described as much benefited, but death ensued from heart disease. He has modified the Windler syringe to make it stronger, with a metal tip that screws on, and a handle to enable it to be more strongly grasped in making injections into the uterus above the cervix, which require considerable effort. He adds that he never draws down the uterus, but leaves it in its normal position, so that the alcohol can find its way into the tissues without undue distention, which might cause necrosis. Alcohol has no effect on mastitis chronica and is therefore a means of differentiation. Several cases of mastitis chronica refused to accept his diagnosis, and had the breast removed by other surgeons, when histologic investigation confirmed his statements.

Small Medicinal Enemas for Children.—"An enlightened return to the practice of administering medicines by the rectum seems to us a veritable progress." With these words Monteuuis concludes an urgent appeal for the more general use of the rectal syringe in treating children. In convulsions nothing acts more rapidly and surely than a teaspoon or half, of pure glycerin administered per rectum, followed in fifteen minutes by a second injection of 25 centigrams of antipyrin in the first year, and 50 in the second, increasing 50 centigrams for each year. According to the author, Comby and others, children tolerate quite large doses of antipyrin without disturbances, so that it can be prescribed with confidence. If there are febrile and convulsive symptoms it must be given in large and not fractional doses. In convulsions it should be administered at 1-10 to 1-20 according to the age. The solution at 1-5 produces a slight, transient smarting. In vomiting, with gastric disturbances and headache, antipyrin is again indicated, and the rectal method by far the one to be preferred for several reasons. Habitual constipation often yields permanently to small injections of pure glycerin. When it is necessary to supply the system with liquids in infective diseases, to ensure the proper functions of the kidneys, etc., the liquids can be supplied through the rectum and all the medicines administered that way. The doses are generally the same as by the mouth. Antipyrin seems to act more rapidly per rectum, and quinin is equally effective (the neutral hydrochlorate), and is compatible with antipyrin. None of the means in vogue will soothe the nervous system as rapidly and effectively as these small medicinal injections. They are the most powerful and the most practical as has been demonstrated again and again. The evils of the old fashioned bulb syringe are avoided by using a small glass pneumatic syringe containing 5 to 6 c.cm. with a rubber nozzle, "which should be in every mother's arsenal."—*Gaz. Méd. de Liége,* November 5.

Eucain in Tooth Extraction.—The London *Therapist*, September, states that the following procedure has in denistry been found acceptable:

1. Dissolve 1 part of eucain in 10 parts of water, and boil the solution; before injection the solution must be quite clear. It is best preserved in a small stoppered glass bottle.
2. Before extraction disinfect the mucous membrane thoroughly by washing with a plug of cotton wool soaked in hydrogen peroxid or a 2 per cent. carbolic acid solution.
3. Make the injection by inserting the needle well into the gums, about half way up the alveolus, and only inject so much of the solution that the mucous membrane in the neighborhood becomes white and slightly raised. Both buccal and lingual injections must be made. It is most important that the solution should not be injected at the junction between the gums and the mucous membrane of the cheek.
4. The extraction is made about one minute after, when the patient has himself felt the anesthesia, and not directly after injection.
5. After hemorrhage had ceased, I remove the eucain solution by puncturing with the needle and pressing upon the part with my finger.
6. Slight swellings nearly always occur after every extraction with resection. If the operator has used much eucain and especially if it has been injected near the juncture of the gums with the mucous membrane of the cheek, so that edema is anticipated, the patient should be told that a swelling will probably appear but be perfectly painless and subside of itself within a day or two. I consider this swelling quite without danger, as it is completely painless and so quickly subsides, and because I have never observed any other secondary symptoms

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SATURDAY DECEMBER 5, 1896

CONGENITAL HYPERTROPHY OF THE PYLORUS AND STOMACH WALL

Instances of congenital hypertrophy of the muscular tissue of the pylorus and stomach are so rare, the etiology of the condition is so obscure, and the ultimate consequences so serious, that the following brief reference to the report of two cases by John Thomson[1] may be of interest Pitt[2], Peden[3] and Hirchsprung[4] have reported cases more or less similar, but ordinarily the condition is not mentioned in the usual text-books

The first one of the cases reported by Thomson concerns a male infant, eighteen days old, who for a week had been vomiting all his food The only physical sign of disease that could be found was great emaciation There was no distension of the bowels, and no abnormality on palpation of the abdomen There was nothing in the family history to throw any light upon the condition When the infant was born it was well developed and well nourished From the eleventh day of its life it vomited everything until it died The vomited matter consisted of the milk he had swallowed, there were never any signs of blood in the vomited matter

Postmortem examination disclosed the fact that all the organs were healthy except the esophagus, which was greatly dilated, and the stomach, which was greatly distended The pylorus was very much thickened and felt like a solid cylinder, it measured nine-sixteenths of an inch in diameter and one and two-thirds inches in circumference Compression of the stomach failed to force any of the fluid contents through the pylorus There was no abrasion or scar of the gastric mucous membrane, but the muscular wall of the stomach was greatly thickened especially toward the pyloric end Microscopic examination showed the muscular layer of the pylorus to be more than three times its normal thickness, the greater part being made up of circular fibers

The second case concerned a male infant nine and one-half weeks old It was healthy at the time of birth, and the family and personal history of the parents contained no items that would throw any light upon the disease of their child, which was the fourth While in good health up to about the fourth week, he nevertheless very frequently wetted his bib by vomiting a little after each nursing At the fourth week he began to vomit everything, the vomiting usually occurring about a half an hour after the food was taken The vomited matter consisted of the liquids taken, along with some yellowish mucus, but no blood

Death occurred when he was nine and one half weeks old The postmortem examination showed considerable emaciation, but all the organs except the stomach were quite normal The esophagus was dilated in this case also The stomach was elongated and slightly hour-glass shaped, the pylorus was distinctly enlarged, feeling almost solid, and measured one and seven-eighths of an inch in circumference and five eighths of an inch in diameter No fluid could be forced through the pyloric orifice upon compression of the stomach The wall of the stomach in the region of the pylorus was greatly thickened, and microscopic examination showed this thickening to be due to an hypertrophy or hyperplasia of the muscular tissue, the serous coat being normal, the mucous coat in a state of chronic catarrh

In these two cases, as well as in the few similar ones reported, the essentially prevalent condition was hypertrophy of the muscular coat of the pylorus and of the adjacent stomach wall, but there are no data present sufficient enough to explain the causation of this hypertrophy fully Thomson is inclined to believe that the hypertrophy of the muscle was due to over-action and that the exaggerated functional activity must have been continued for a long time, and must have occurred in utero While it is doubtful whether the liquor amnii, swallowed by the fetus, contributes to its nourishment, it is admitted that a large amount of fluid passes through the stomach of the fetus during the latter part of pregnancy This passage would excite some peristaltic action and excessive and irregular contraction of the pyloric muscle would give rise to some hypertrophy of the muscular coat of the stomach The cause of this spasm of the pylorus might be attributed to, 1, a local lesion, such as an ulcer of the mucous membrane, causing undue irritability of the nerves supplying the pylorus, 2, to some irritative property of the fluid entering the cavity of the stomach 3, to some disturbance of the nervous mechanism which regulates the contraction and relaxation of the pylorus under appropriate stimuli

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[1] Edinburgh Hospital Reports Vol 4 1896
[2] British Med Journal 1891, 1, p 896 Trans London Path Society 1892 p 63
[3] Glasgow Medical Journal, 1889 p 416
[4] Jahrb f Kinderheilk, xxviii, p 61

Now, in these two cases, the first of these conditions may be eliminated, because there was no evidence of any local lesion, such as an ulcer of the mucous membrane, discovered at the postmortem As regards the second condition, an abnormal composition of the liquor amnii might be present and give rise to changes in the mucous membrane in the stomach and to irregular muscular contraction, but this can not be said to be likely, because there were found no changes in the lining membrane of the stomach, or for that matter, in the rest of the alimentary canal

Consequently, the third proposition may be looked upon as the most likely If the coordination between the stomach wall and the pyloric sphincter were disturbed, even but very little, so that the two contracted simultaneously, it is easy to understand that both would be continuously and greatly overworked It is not improbable that coördinated muscular action taking place in the uterus should occasionally become disturbed, apart from structural lesions, just as similar processes are apt to occur in later life Hence the hypothesis that disturbed coördination is the fundamental factor seems at the present time the most likely of the theories that have been propounded to explain this congenital hypertrophy of the pylorus and stomach wall

By drawing attention to these cases it may be hoped that the diagnosis of the condition might be made earlier, and that some radical treatment of a surgical nature might be put into practice, which would relieve this otherwise apparently irremediable condition

SWIZER[1] reports a case of congenital hypertrophy and stenosis of the pylorus in a girl three months old of the same nature as THOMSON S cases He calls attention to the great importance of diagnosis in these cases and lays down the following diagnostic points 1, constant vomiting, without any clinical reasonable cause 2, evidences of retained gastric contents due to motor disturbances of the propelling forces, 3, absence of occlusion symptoms in the intestines 4, the ease with which the stomach and the pylorus may be palpated He also emphasizes the evident fact that surgical treatment, LORETA's operation or gastro-enterostomy, offers the only chance for these small patients

THE PROGNOSIS OF EXOPHTHALMIC GOITRE

There are probably few disorders that are regarded as more uncertain in their prognosis than is exophthalmic goitre, and the general impression in the profession as regards the future of its victims, is undoubtedly an unfavorable one While life is rarely threatened by the disease, at least directly, a cure is hardly expected, much less confidently promised in any case It is consoling therefore to find from an analysis of statistics presumably made with care and due estimation of all the facts, that the outlook is somewhat better than is generally admitted in the rather dubious state of the medical mind on this subject Dr R T WILLIAMSON of Owens College, Manchester, published in the *British Medical Journal* of November 7 an analysis of thirty out of fifty cases treated in the Manchester Royal Infirmary, in none of which was any operative treatment attempted The remaining cases passed from under observation too soon to enable any opinion in regard to them to be properly formed and hence could not be properly utilized in the inquiry The facts as to the thirty were obtained by careful investigation, either by direct observation or by correspondence

Four of the thirty died while under observation with pronounced organic cardiac complications, two succumbed later under apparently similar conditions In five cases, three of them well marked and of long duration, recovery was complete, and in two practically so Six patients were very decidedly improved, only moderate inconvenience being felt from palpitation, enlargement of the thyroid, etc , that were remaining as reliquiæ of the disorder In seven cases, all of a year or more duration, there was slight improvement, and in one well-marked case it could only be ascertained that the patient was following her ordinary occupation (that of a domestic) without details as to her exact condition In only three was the condition stationary

The above statistics are more favorable than many at the present time would have anticipated, recovery complete or practically so in 22 per cent , an equal percentage of very decided improvement, and to these we should probably add the case of the domestic who was able to follow her occupation, for there would be necessarily very little disability permitted there, making a total of nearly 50 per cent of recoveries or very decided improvement "Eliminating the cases that have been under observation during the shorter periods, and including" says Dr WILLIAMSON, "only those cases which have terminated fatally, those which have recovered, and those in which the disease has existed for over five years, we have the following results in twenty-four cases Fatal termination in six cases, recovery complete or almost complete in seven improvement in seven, condition much the same in three, patient alive and following her occupation

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[1] New York Medical Journal Nov 21 1896

(exact condition unknown) one case" This gives a percentage of recovery of 29 and of recovery and decided improvement in nearly or quite 60 per cent, which the Doctor believes represents fairly well the average course or results of the disease

When we consider that only two or three of the above cases were described as "slight" the significance of the above figures is increased Many cases of exophthalmic goitre are unrecognized from incipiency to recovery and this fact should be considered in estimating the prognosis of the disorder When the statistics of pronounced hospital cases are as favorable as the above, the outlook for the average, including the slighter home treated cases, and the actual but unrecognized ones occurring in the practice of those who are unfamiliar with the disease or that go altogether uncared for, is certainly very favorably modified from the one that is probably accepted at the present time by the mass of the profession

CHANGES IN THE PUPILLARY REACTIONS IN THE INSANE

Variations in the size of the pupils may be due to either local or remote conditions, morbid or physiologic Glaucoma, myopia, amblyopia and amaurosis are likely to be attended with some degree of pupillary dilatation, while hyperopia, hyperesthesia of the retina and advanced age are usually attended with contraction of the pupil The pupil will be large when the fibers it derives from the third nerve are paralyzed or those derived from the cervical sympathetic are irritated and it will be small under the reverse conditions These effects may be induced by drugs and other physiologic agencies, or by inflammation, traumatism, new growths and other morbid processes The usual reactions to stimuli fail whenever the reflex arc through either the cervical sympathetic or the optic nerve on the one hand, and the third nerve on the other, is interrupted at any part of its course The reaction with convergence and with accommodation remains as long as the integrity of the fibers of the third nerve is maintained

It was at one time supposed that a difference in the size of the two pupils was a certain indication of paretic dementia At a later date this view was enlarged so as to include all mental disorders Special instruments were devised for the purpose of determining the smallest variations in size and attempts were made to decide the character of the delirium in cases of paretic dementia by the behavior of the pupils When the right pupil displayed the greatest variation the delirium was viewed as melancholic, and when the left the delirium was believed to be maniacal Conclusions were also based upon the form of the globe and changes in the eyebrows An accumulated experience has shown, however, not only that the pupils vary in size but that they may present marked degrees of inequality both in health and under other conditions

While previous observers had given attention to the mobility of the pupils, in addition to differences in size between them, it remained for ARGYLL ROBERTSON in 1869 to attach the proper significance to the reflex immobility of the pupil, that is, its failure to react to light-stimulation After the importance of this phenomenon in the recognition of locomotor ataxia had been generally appreciated observation from the same point of view was directed toward cases of mental disorder, with the result of finding the sign to be common also in cases of paretic dementia

In a collection of 3010 cases of paretic dementia tabulated by SIEMERLING (*Berliner klinische Wochenschrift*, Nov 2, 1896, p 973) the reaction of the pupils to light was found wanting in 1285, or 42 per cent, and diminished in 799, or 26 per cent The diagnostic significance of this observation is obvious, especially as the phenomenon is likely to be present at a time when other symptoms are absent or ill defined In the same group of cases inequality of the pupils was noted in not more than 963 cases, or 32 per cent Comparative studies of the knee-jerks and pupillary reactions of paretic dementia have shown that their associated absence is the more common the further advanced the progress of the disease

In the psychoses in general reflex immobility of the pupils is bilateral in the majority of cases, though there may be differences in degree between the two sides Permanent unilateral immobility is, however, very rare In most cases the shape of the pupil also undergoes change, becoming angular, zigzag or elliptic Examinations of 300 insane patients by MUSSO have shown irregularity of the pupils in 182, or 63 3 per cent On the other hand, of 100 healthy persons 89 had round pupils and not one elliptic, while of the insane 7 3 per cent had elliptic pupils

In two cases of paretic dementia uncomplicated by locomotor ataxia SIEMERLING found the peculiar reaction described by GOWERS—primary contraction of the pupils on exposure to light, with secondary return to its original size, notwithstanding the maintenance of the light-stimulus Reversal of the pupillary reflex, the so-called paradoxic contraction, is rare, the pupils dilating on exposure to light, and vice versa In rare instances the pupils may vary in size at different times of the day, although they may fail to react to the usual stimuli Hippus, or restlessness of the pupils, appears to be an uncommon manifestation of paretic dementia Slight oscillation of the pupils is present in health, as a result of various forms of sensory and psychic irritation, to which the organism is constantly exposed, so that hippus may be viewed merely as an exaggeration of a physiologic manifestation, resulting from increased activity of physiologic stimuli or of undue susceptibility of the centers controlling the movements of the pupils

A study of 9,160 cases of mental disorder under observation at the Charité of Berlin during a period of ten years, in which examinations of the eyes were made, shows that reflex immobility of the pupils was present as follows Paretic dementia, 1,524 cases (92 per cent), locomotor ataxia in association with psychoses, 29, senile dementia and local disease of the central nervous system each 19, syphilis of the central nervous system 17, alcoholism 15, paranoia 7, epilepsy and hysteria each 4, head-injuries 1 On the other hand in previous examinations made by UHTHOFF in 550 cases of nervous disease and 12,000 of ocular disease, reflex immobility of the pupils was found only 136 times, in 92 cases of locomotor ataxia 12 of paretic dementia, 11 of syphilis, 8 of other forms of focal disease, 2 of multiple sclerosis, 2 of railway spine, 2 of congenital origin, 1 of head-injury, 1 of aneurysm of the aorta, 1 of congenital idiocy, 1 of tobacco-excess, 1 of hystero-epilepsy and 1 of right hemianesthesia, in 3 cases no cause could be decided upon From these data it will be seen that reflex immobility of the pupils is a most important symptom, and although not an absolute indication of such grave disorders as paretic dementia and locomotor ataxia, it may be looked upon as positive evidence of disease of the nervous system In this connection it is to be borne in mind that sometimes long intervals may elapse between the appearance of the pupillary phenomena and the development of other distinctive symptoms

It is well known further that the pupils often became dilated under conditions of fear in the somnambulistic state and in that of ecstacy, especially in debilitated and neurotic persons In the intervals between epileptic attacks the pupils have been observed to be not only large but also unusually susceptible to reflex irritation In some cases the pupils also differ in size During a paroxysm the pupils are both dilated and unresponsive to light This last peculiarity is characteristic of epilepsy and distinguishes it from hysteria, so that if in a given case the pupils react to light in some convulsive attacks and fail so to react in others the condition may be looked upon as one of combined hysteria and epilepsy The pupils are said to be usually contracted at the beginning of the hysteric or hystero epileptic seizure, becoming dilated in the tonic-clonic stage, in which also oscillatory movements take place, to become pronounced in the stage of passionate attitudes In the tonic stage of the epileptic paroxysm the pupils are dilated and in the clonic stage alternately dilated and contracted In hypnotic and hallucinatory states the pupils are said to react in accordance with the distance from which imaginary objects are viewed Attentive listening to the ticking of a watch has been attended with dilatation of the pupil corresponding to the listening ear

Sensory irritation causes pupillary dilatation in health, though not always in the aged This reaction has been found wanting in cases of paretic dementia, as a rule in association with absence of the pupillary contraction to light stimulation, although at times pupils unresponsive to light-irritation underwent dilatation the knee-jerk was often wanting The reaction was active in epileptics and timid persons It could be induced by irritation of anesthetic areas in cases of hysteria, but not when the impairment of sensibility was due to peripheral disorder Pupillary reaction to sensory and light stimuli is wanting in conditions of coma and returns slowly afterward There is no consensus of opinion as to whether the reflex activity of the pupils to light or that to other sensory stimuli ceases first Hypalgesia of the skin appears to have no influence upon the sensory reflex of the pupils It has been found that the reaction-time of the pupillary act is increased in paretic dementia and some other nervous disorders Increased activity of the pupillary reaction has been observed following widespread circulatory disturbance and in cases of morphinism after withdrawal of the drug

A consideration of the foregoing summary will show that a careful and systematic study of the size, form and activity of the pupils under various conditions is capable of yielding important information, which future classification and further experience may prove to be of considerable value in diagnosis and prognosis as well as suggesting certain therapeutic indications

THE SLOWNESS WITH WHICH IMPORTANT MEDICAL DISCOVERIES ARE GENERALLY PUT TO PRACTICAL USE

It is a remarkable and lamentable fact that many years often elapse before an important and scientifically established discovery in either the theory or practice of medicine becomes an essential constituent of diagnosis and treatment in the hands of the practicing physician The newspaper-advertised fad is quickly enough caught up, but alas, the newspapers know nothing of the great scientific advances in medicine

Too much caution can not be exercised in the investigation and adoption of medical innovations It goes without saying, that as a rule, experimentation should not be pursued in private practice The field for such work is generally in the hospitals and laboratories established for original research, and carried on by men carefully trained in practical knowledge and observation, and who by specializing their studies, are usually much more capable of producing valuable and definite results than their fellows engaged in the practice of general medicine Conservatism in medicine is at all times highly desirable But, alas! there are men who, either from indifference, scepticism, ignorance, or, if it must be said, from absolute laziness refuse to avail themselves of genuinely scientific and established methods Take, for example LAVERAN's important discovery of the plasmodium of malaria, how many men go on blindly prescribing ounce after ounce of quinin on the slightest suspicion or faintest indication in clinical history? Yet these very men are not seldom the faddists and fanatics who rush headlong in their eagerness to experiment with such remedies as antitoxin and tuberculin, made notorious by the newspapers One can but laugh at some surgeons with inexperience in practical physics and photography, and working with crude apparatus, who publish elaborate reports and show skiagraphs of a foreign body located by the Roentgen rays Personal vanity and desire for publicity stand out in every line of such reports Yesterday by such simple means as inspection, palpation and percussion, in which these men had become expert by long use, they would have attained the same result in infinitely shorter time The individual skill of years is ruthlessly discarded in bungling efforts to appear as an "up to date" surgeon

On the other hand, when we review the patient struggles of JENNER to establish vaccination, of PASTEUR, LISTER, and their associates, to promote asepsis and antisepsis in surgical maneuvers, of the hygienists to instill into the public mind principles and laws of which the medical mind generally seemed ignorant, we find abundant proof of the truth of our contention At the present time, how many graduates of medicine are seeing a dozen or more patients a day, and prescribing for their maladies without once resorting to a urinary examination, unless absolutely compelled by consultation, or by life insurance companies? The writer has personally known several instances in which men with large general practices never make an analysis of the urine How many are treating headaches, neuralgia, nervousness, hysteria, dyspepsia and other disturbances that are often reflex, without the slightest means of determining the existence of some form of ocular asthenopia, or if they are incapable of making this investigation, without consulting an oculist, despite the reports of hundreds of reflex neuroses caused by some ocular trouble such as an uncorrected error in refraction? Trustworthy oculists and general physicians certify that sick headache frequently (some say always) is due to eye-strain, yet thousands of sufferers are today left in misery and ignorance of the fact by their physicians? The latest book from the press, by a distinguished specialist on diseases of the stomach, makes no mention of the indubitable influence of refraction anomalies in begetting functional stomach disorders How many are daily treating blood-dyscrasias regardless of the modern methods of blood analysis and corpuscle-counting, which, beyond all sceptical argument, are important and infallible elements of diagnosis?

These and many similar questions can have but one answer, accurately estimated the magnitude of the number is appalling of those in this sorry roll of sceptics (by inclination rather than proper motive) idlers, and even ignoramuses

It needs no extended search to reveal the fundamental causes of it all They are especially two 1, the love of the community, innate, persistent, almost unconquerable for its quacks—those both in and out of the profession proper, and, 2, the commercial medical college A medical college should be an institution of preliminary training, the whole of the after-medical life should be reserved for study, taking advantage of the proper elementary education to further the slow evolution of a skilled physician The graduates of poor or of fraudulent medical colleges are too frequently unable to understand, appreciate, or practice medical advances They are helpless in their lack of laboratory knowledge and technic, and they are debarred from participation by their deficiency in clinical diagnosis There is no more significant and convincing plea for higher medical education, and increased clinic and laboratory training than in these unfortunate facts Early and late we should endeavor to have the State take commercialism completely out of medical education, abolish private institutions, and pseudo-medical colleges, whose motives are too apparent to be called ulterior, forever exterminate the monetary sale of medical diplomas secret or open, for in many cases it is nothing more or less than this, and we shall then be able to meet the taunts of our co-workers in other professions who while acknowledging the superiority and genius of the select few, say that medicine today, as practiced by the great majority is antiquated, empirical and unscientific

No supercilious sneer from the safety of numbers, nor time-worn retorts, such as "calamity howler," "grumbler," and "professional objectionist," can suppress, at least, our lay critics Reforms in medical education alone can convince the world, and place medicine in its deserved position among the sciences of the day

CORRESPONDENCE

Reply to "The Controversy over the Harvey Medical College of Chicago"

CHICAGO, Nov 28, 1896

To the Editor —Being the originator of the discussion regarding the recognition by the Illinois State Board of Health of the Harvey Medical College and others of the same type, permit me to make the following reply to Dr Byron Robinson s letter which was published in your last issue

The writer of the letter for some of whose opinions in his special field of work I have the highest respect, h is under taken with one master stroke of his pen to apparently settle the difficult problem of medical education by proclaiming the Harvey Medical Evening Coll [illegible] o the queen of med ical institutions. At least that is the tone of the Doctor's article.

Had I not known any more about the Harvey than is given in the above-named letter I should have unqualifiedly agreed with the Doctor and joined in his praises of Harvey and never would I have uttered a word in condemnation of its methods.

But Dr. Byron Robinson has only told us one half of the truth. The fact is, that the statements as given in his paper have been handed him by the college secretary just as the dry goods man gives an advertisement to the daily press. And here was a real opportunity to get cheap advertising. Besides, his statements have a fatal resemblance to those made in Harvey's Annual Announcement and in the lay press of Chicago. It is well to remind those who have not followed up this controversy of the reasons why the Harvey has of late been mentioned at all.

Two of Harvey's professors have positively resigned their respective chairs because pressure was brought to bear upon them to sign diplomas of candidates for graduation who did not pass their very important branches of the practice of medicine and pathology respectively. It was also found that out of the eight candidates whose diplomas were to be signed—because the management decreed it so—not one had even *credentials* for pathology, some failed in medicine, few had credentials of any sort, not to speak of a preliminary education. Furthermore, examination papers in my posession show that not only do some students of Harvey lack the necessary qualifications for admission into a medical college, but that they are also devoid of the most rudimentary knowledge of English syntax and orthography.

To prove this. One sophomore student spells the word *infiltration* twice in two succeeding sentences, *inflatration*, and again *lukecytes* for leucocytes, *necrossis* for necrosis, *unpripard* for unprepared. I could fill up columns with the most unpardonable errors in syntax and spelling committed by Harvey night school students, but space does not permit it.

As regards the teaching faculty Dr. Robinson says: "In short, the faculty consists of a body of fifty respectable men and women, who are giving intelligent and thorough modern medical instruction." Of course, the Doctor then picks out five names and himself and wife and asks: "Who are the teachers connected with Harvey College that they should be agents of a diploma mill?" In answer to this question I will say that they are not the agents who get pay, but the tools of a diploma mill, whether they know it or not. They get their reward in being called "professors," which title enables them to throw dust into the eyes of an unsuspecting public.

Besides, as regards ability, one of Harvey's full fledged professors would not even be admitted as a student into any school in good standing. I had occasion, as the then professor of pathology, to examine that professor in my branch, for that professor is still a student. For lack of space I can not give any of the syntax found in the professor's examination papers, but a few words as they are spelt by the professor may with propriety be inserted here: parenchima for parenchyma, adapoise for adipose, lucocytes for leucocytes, Kleobs leifler, Kloebs Leifler for Klebs Loffler, vagimia for vagina, generaly for generally, fibronous for fibrinous, tomane for ptomaine, odemia for œdema, disolution for dissolution, suporate for suppurate, vegatable for vegetable, etc.

The professor in question is still teaching at Harvey at the date of this writing. Of course, comment is unnecessary and every reader can form his own idea regarding the education of such a professor. But how Dr. Byron Robinson and his wife, Dr. Lucy Waite, happen to be mixed up with that class of professors, I can not comprehend; the fact remains, he is there. Surely there is another way out of the difficulty beside eulogizing the institution and its faculty.

The Doctor starts his letter with an enumeration of all the students who graduated from Harvey and speaks of their attendance at other colleges previous to their entrance in Harvey as seniors, and right there is where he mistakes mere matriculation for attendance. Everyone knows how easily a matriculation ticket can be procured and that it is not even equivalent to admission into a school, still less is it evidence of having passed in junior branches, but that students have been admitted into Harvey College as juniors and seniors who have *never* produced a ticket of attendance anywhere, is quite sure, and the Doctor knows it.

Again, the Doctor mentions the fact that several Harvey students from the sophomore and freshmen classes were admitted to advanced standing into other respectable colleges. This speaks well for their good judgment, first in entering a good school and second, in working hard to be admitted into another school. None of the Harvey professors, not excluding the secretary, ever doubted that the freshmen students were far superior to the graduating class in intelligence and preliminary education.

One point in Dr. Byron Robinson's statements, upon which he expends considerable mathematical energy, should be particularly mentioned, namely, his figures of the number of hours that Harvey night students have as compared with the still existing standard day schools of six months instruction per year. But does not every physician who has been a student know that the mind can absorb knowledge more readily in the early part of the day than in the evening; that, when mind and body are fatigued, one might as well go to sleep as study? And is it not a fact that when one has followed any ordinary occupation for the entire day, that he is tired in the evening, and that even three lectures of the Dr. Robinson style, delivered from 7 to 10, evenings, will act as a hypnotic?

Occasional glances into Harvey's lecture rooms during lectures have, beside, convinced me of the strong hypnotic powers possessed by Harvey professors. When can such a student find time to study and review when he must rise early in the morning in order to reach his place of occupation?

"Was not Lincoln a rail spitter?" the Doctor exclaims. This point has repeatedly been made by all varieties of public declamers; but Lincoln ceased to split rails when he entered college; he no more belonged to the rail splitters when he studied law, while Harvey night school students do.

Again, "during the past two years every senior saw one or more labors." Of those that came up for graduation in 1896, I know positively that about one half of the students never saw a case of labor. Students have been promised ten labors in 1897. To make a promise and to fulfill it are two things.

What the student should see beside labors, are the diseases that he may encounter in his daily practice. Why labors are made a specialty in Harvey College may probably be accounted for by the fact that there are so many ladies connected with the school.

As a last resort, Dr. Byron Robinson takes up an inventory of Harvey's belongings, and counts in everything he finds round about the building, even the poor students' microscopes, for it is a fact that each Harvey student must buy his microscope on the installment plan from the faculty if he wants to look through one. Harvey offers space for the storage of microscopes gratuitously. There are several things that Dr. Robinson left out in his inventory, such articles of wealth as chairs, benches, stationery, etc.

Speaking of the Harvey building, any one who takes a stroll through Clark Street will find—if he patiently searches for it, in spite of the deafening roar from the dime museum orchestra across the street—a building inscribed the Harvey. In that building is a Good luck store, above this a private dispensary, a dentist, and then the private offices of some members of the faculty. The top floor and the one below it constitute the Harvey College proper. The entire building, however, has been christened "The Harvey," as per contract This is the building which Dr Byron Robinson has found in the real estate records under the name "Harvey "

That the medical profession has never recognized Harvey as a college in good standing, and that it has not even been given a passing notice in the JOURNAL, will be learned from the following editorial published in the JOURNAL of September 12

> "There are many alleged medical schools not accounted for in this exhibit, but as a rule, they ought not to be considered We have been informed that there are about fourteen medical schools in Chicago, alone, only a few of these have any reason for existence, and if rigid requirements were insisted upon they would close their doors
>
> "The struggle for existence is at the root of the evil, finding themselves unable to compete with the real college professor in obtaining practice from the public, these persons, with others of the same ilk, start a so called medical college, and become a 'professor' themselves There are few statutory requirements, an act of incorporation can be obtained for a silver dollar in any stage of depreciation, a building rented and a flaring sign put across its front Verily, the 'professors' are as plenty as the leaves of Vallambrosa If we look into the equipment of these raw institutions we find the laboratory wofully lacking in the most ordinary apparatus, and like Do the boys Hall squalor and filth are the most prominent characteristics The only wonder is that such men, with such miserable equipment, can find students, but they flourish in some way "

And in the next number of the JOURNAL under the heading "The Medical Colleges of the United States," we find of Chicago colleges, the Northwestern University Medical School, Rush Medical College College of Physicans and Surgeons, Northwestern University Women's Medical School, Chicago Policlinic and Hospital, and Post Graduate Medical School and Hospital, but not a word is mentioned of either Harvey Medical Night School or any of the other so called medical schools This simply shows the good sense of the representative medical journal of this country and of the profession generally

Dr Byron Robinson evidently believes that the fair minded editor of the *Western Medical Review* who so strikingly criticizes the sorry state of affairs in Illinois must of necessity, become a Harvey professor before he can acquire correct judgment

But since Dr Byron Robinson has become the teacher of gynecology and abdominal surgery in the Harvey Medical Night School, we are glad to learn that fact, "so that the appearance of evil may not arise "

And as a fitting supplement to Dr Robinson's article I would request the journals to copy this article in the interest of the profession that stands not only for " truth and justice," but also for higher medical education

Respectfully, JULIUS GRINKER, M D
952 Milwaukee Ave

"A Prevalent Error in Refraction Work"

CHICAGO, Nov 29, 1896

To the Editor —Dr Ed J Brown's letter on "a prevalent error in refraction work," published in the JOURNAL of November 21, was to me full of surprises "That most oculists have been giving low plus cylinders where minus lenses were indicated," was startling news to me, for I had never suspected this, though through private conversation and public discussions in ophthalmologic societies I am well acquainted with the views of a great many oculists on the question of correcting refractive errors But I got a second and stronger dose of surprise when I found I, too, was counted among the guilty ones because I was supposed to have given a clergyman a + 50 cyl axis 90 instead of a — 50 cyl axis 180

The oculists among your readers, of course, clearly understand from Dr Brown's own report of the case, that in this instance the asthenopia was *not* caused by the refractive, but by the muscular anomaly But to your readers unfamiliar with the mysterious jargon of ophthalmology this may seem an awful blunder, and I therefore wish to explain to them that the mistake, if one was committed, was not on my side If the astigmatism had been the disturbing element, the + 50 cyl would have permanently relieved the patient's trouble in reading, whether the astigmatism was hyperopic in the horizontal meridian or myopic in the vertical meridian For if hyperopic astigmatism the + cyl rendered the eye emmetropic, if myopic astigmatism, the same cylinder made the eye uniformly myopic, a condition even more advantageous than emmetropia, for prolonged near work to a man now 38 years old

Dr Brown kindly gave me the name of the patient when I wrote for it, and I found in my records that he came to me in July, 1892, with + 50 cyl 90 which he had been wearing since February, but without marked benefit He chiefly complained of eye pain and headache after short reading, and incidentally remarked that one year previous he was given — 50 cyl 180, which he could not use at all I found a slight hyperopic astigmatism for which the + 50 cyl were the proper lenses, and since these glasses had not relieved the patient I became satisfied that his asthenopia must be due to some other condition than the astigmatism The muscle tests showed insufficient adducting power (6° only), marked divergence under cover and exophoria (9°) at reading distance These findings convinced me that the case was one of muscular asthenopia, it was entered as such in my record book and my prescriptions to the patient were directed toward relieving temporarily the weak muscles during near work so as to make reading easier for him, and to improve the feeble adducting power by systematic exercise

As to the cylinders the patient was wearing, I saw no reason why I should object if he wished to use them, for in my opinion it was of no consequence whether they were worn or laid aside I do not attribute the relief the patient experienced for nearly two years afterward to the use of the cylinders but to the changed muscular condition, the adduction having gained considerably, as shown by Dr Brown's report, and I am firmly convinced that this patient will be permanently relieved only when the forces of the eye muscles are properly adjusted by appropriate treatment suggested by a careful study of existing anomalous conditions Though during the past year he seemed to have been better satisfied by the — 50 cyl (which formerly he postively rejected), I am sure he will sooner or later return with his old asthenopic complaints and, indeed, in his letter to me of November 25, Dr Brown wrote "I saw the patient Monday evening and he mentioned symptoms which are probably referable to the weakness of the externi " *Sapienti Sat*

F C HOTZ

"God and the Doctor we Alike Adore"

ST PAUL, Nov 30, 1896

To the Editor —The lines quoted by R M W in your issue of Nov 28, 1896, and concerning the authorship of which he asks information, are a translation of a Latin epigram written by Euricius Cordus who was a professor of medicine in Marburg in the sixteenth century The *original Latin* is

"Tres medicus facies habet unam quando rogatur,
Angelicam, mox est, cum juvat ipse, Deus
Post ubi curato poscit sua premia morbo,
Horridus apparet terribilisque Sathan "

Yours truly, BURNSIDE FOSTER, M D

MONONGAHELA, PA, Nov 30 1896

To the Editor —R M W of Brooklyn N Y, will find the lines,

" God and the doctor we alike adore
But only when in trouble not before
The trouble o er, both are alike requited
God is forgotten, and the doctor sl[illegible]ted "

in Ben Jonson's "Magnetic

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C B

Practice for Sale

CHICAGO, Dec 2, 1896

To the Editor —I leave Chicago on Jan 1, 1897, to take special work in European hospitals and I desire to dispose of my practice without a total loss I therefore write to you to inquire if you have any inquiries for such a location I am well established in the largest family hotel in Chicago and will sell cheap, as all my arrangements are made to leave Chicago January 1 or before J D W

ASSOCIATION NEWS

Philadelphia Semi Centennial Meeting of the American Medical Association, June 1, 2, 3 and 4, 1897 —In view of the fact that the next meeting will be the semi centennial gathering and that it will occur in the great medical center and near the other great cities of the Eastern Coast, the Committee of Arrangements for this meeting have already made provision for accommodation and entertainment of the delegates by the engagement of the Academy of Music, Horticulture Hall, the South Broad Street Theater and the large meeting rooms in the Hotel Walton and the Hotel Stenton As these large buildings are all within a short distance of the great railroad depots in the center of the city and are all situated within one block on both sides of Broad Street, every department of the meeting will be conveniently arranged The following hotels, all of them within a short distance of the meeting halls, have offered the following rates to the members of the ASSOCIATION

Hotel Walton, Broad and Locust Streets (Headquarters) $1 50 and upward per day, European plan, $4 and upward per day, American Plan

The Colonnade, Fifteenth and Chestnut Streets (three squares from meeting) $1 and upward per day, European plan, $3 and upward per day, American plan

The Lafayette, Broad and Chestnut Streets (one and one half squares from meeting) $1 and upward per day, European plan, table d'hôte, breakfast 25c to $1, luncheon 75c, dinner $1 25

The Bingham House, Eleventh and Market Streets (six squares from meeting) $2 50 and upward per day, strictly on the American plan

Hotel Stenton, Broad and Spruce Streets (opposite meeting) $2 and upward per day, European plan, $4 and upward per day, American plan

The Continental, Ninth and Chestnut Streets (eight squares from meeting) $3 and upward per day, strictly on the American plan

The Windsor, Thirteenth and Filbert Streets (three and one half squares from meeting) $1 and upward per day, European plan, $2 per day, American plan

The Stratford, Broad and Walnut Streets (one square from meeting) $1 and upward per day, European plan only

The price quoted in each instance is for one person only Rooms commanding only the lowest prices are naturally limited in number All these hotels can be reached in a few minutes by trolley cars

It is especially desirable that each member intending to be present at the meeting shall personally, or by letter, make his arrangement with the hotel at which he desires to stop

At the last meeting of the ASSOCIATION it was decided to devote the first evening of the meeting, Tuesday, June 1, to dinners of the various Sections The officers of the Sections desiring to give such a dinner will please communicate with Dr G E de Schweinitz, Chairman of the Sub committee on Accommodation, 1401 Locust Street, as early as possible in order that dining rooms may be engaged or other entertainment provided

As it is expected that fully three thousand physicians will be present the Committee suggests that application for accommodations be made as early as possible It is hoped that every member of the ASSOCIATION will make a special effort to attend Further circulars of information will be issued by the Committee from time to time

Individuals and firms desiring space for exhibition in the Exhibition Hall, which will be in the same block as the various meeting halls, will please apply promptly to the Chairman of the Sub committee on Exhibits, Dr Edward Jackson, 1673 Locust Street, Philadelphia

Section on Obstetrics and Diseases of Women —*To the Members of the American Medical Association* Being desirous of securing a large number of papers for the section on Obstetrics and Diseases of Women for the Philadelphia meeting, and wishing to make this the greatest meeting of our ASSOCIATION, I take this method of urging the members of this section, and all who desire to read papers before this section on that occasion, to send the titles of their papers either to my address, or that of Dr George H Noble, Sec'y, Atlanta, Ga, not later than January 30 The necessity for promptness in this matter will be readily understood by all interested

MILO B WARD, M D, Chairman
332 Greenwood Ave, Topeka, Kan

SOCIETY NEWS

Association of American Medical Colleges —*Committee on Syllabus* —The work of this committee was published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, April 18-25, 1896 A reprint was made, which can be furnished to teachers and colleges on application to the secretary The work already done has received commendation from many educators, and has been found helpful in reorganizing and extending the course of many medical schools A third meeting of this committee is called for Thursday and Friday, December 17 and 18, at the College of Physicians in Philadelphia, and an attempt will be made to complete the work of the committee both by revising the report already made and by completing the outline for "group 3," *i e*, medicine, surgery and obstetrics Any college having membership in the Association would assist the committee by sending a representative to this meeting or by forwarding to the secretary written criticisms on the work already done or suggestions in relation to the unfinished portions of the curriculum For each of the branches to be considered it will probably be well to discuss and formulate recommendations in relation to the following points

1 The position in the four years' course which it should occupy

2 The amount of time which it demands

3 The method or methods which should be used in its presentation

4 The equipment, apparatus, library, hospital or armamentarium necessary and desirable for the methods proposed

5 The method of testing the proficiency of the student

The committee will meet at 10 o'clock in the morning in the rooms of the College of Physicians and lay out and complete the work as rapidly as the subjects will permit

BAYARD HOLMES, M D, Secretary
104 East Fortieth Street, Chicago

NECROLOGY

GUSTAVUS A SABINE, M R C S E, of New York City, died November 17, aged 84 years He was born on June 27, 1809, in County Dorset, England, and when 15 years old was a student of medicine in the office of Dr McIntire in London He remained there four years, and then entered Middlesex Hospital, London In 1832 he received his degree from the Royal College of Surgeons, and one year later was appointed a sur geon in the East India Company service In 1836 he came to America, and in the following year married a daughter of the late Captain Tufnell of the British Army At various periods of his career in this city, Dr Sabine was curator of the New York Hospital, demonstrator of anatomy in the College of Physicians and Surgeons, consulting surgeon to the Quarantine Hospital and Woman's Hospital He was a member of the New York Academy of Medicine, the County Medical Society and of other medical societies and charitable and religious associations He retired from practice about ten years ago A widow, one son and three daughters survive him He had been in infirm condition of health for a year, due chiefly to the effects of a busy life and the weight of years

Sir Benjamin W Richardson, M D —The recent death of this eminent man, in London, brings out some traits of character which are worthy of all emulation First, he was thoroughly honest and broad in his conceptions and never dogmatic or positive that his views or conclusions were the last and final truths He was ever open to new statements and arguments He was a natural born investigator and examined all topics, no matter what others had found, preferring to ascertain the facts for himself His studies of alcoholic ethers began in this way, not willing to trust to the conclusions of others, he must examine for himself Many of his researches are remarkable for their original work, and the conclusions he reached have been verified by others in many ways His health studies were epoch making and placed him among the leading sanitarians of the world Beside this real genius of discovery, he possessed a graphic power of description in matters of science so clear that any one could understand it This gave him a high rank in societies and public meetings, where he was always able to make himself clearly and thoroughly understood While he described scientific conclusions to the masses, he never sacrificed the truth, or dropped down to levels of obscure or doubtful descriptive language Hence his popular discussions of science topics were as accurate as if presented in the most technical terms Outside of medicine Dr Richardson was widely known as an author and lecturer on temperance questions His researches of the effects of alcohol were practically the first positive data that pointed out the action of alcohol on the body These studies grew out of an invitation to deliver some lectures on alcoholic ethers and their value in sanitary matters He began, as was his custom, original studies before he would make statements of facts The result was the "Cantor Lectures," which has become one of the most widely published books of the times on alcohol As a result of these studies Dr Richardson became a total abstainer and was the most prominent physician in England who denied the value of alcohol in medicine except within very narrow limits Dr Richardson wrote and published a journal, "The Asclepiad," contributing all the matter, which was scientific and historical and of great value He also wrote two novels of much interest and many works of chemical and sanitary science He was a remarkable student all his life and was always investigating and following up some new line of studies He was literally a great man in his scientific generosity, industry and efforts to impart to others the facts he believed to be true

Wm Remsen Taylor, M D , of Long Island City, New York, died October 1, at Middletown, N J Dr Taylor was one of the oldest practicing physicians in Long Island City and was a man widely respected He was health officer of that city for six years and was a candidate twice for the office of coroner and once for mayor, on the republican ticket Dr Taylor was lieutenant colonel of the Twenty ninth New Jersey Volunteers

Thomas McCrossen, M D , of City Island, N Y , who died September 18, was an alumnus of the New York University Medical Department, of the class of 1879 He was a native of New York City, born there in 1851 He was graduated from the public schools and taught at Southampton and Amityville, L I Afterward he took a course in medicine at the College of the City of New York from which he was graduated about twenty years ago He located at City Island sixteen years ago, where he has ever since enjoyed a large practice

Charles Bernacki, M D (Vienna, 1839), of New York died at Schandau, a Saxon watering place, September 17 He was born at Starasol, Galicia, Nov 3, 1812 The first years of his career he spent in different military hospitals of Austrian Poland, and later in private practice in Vienna until he emigrated to the United States, as a part of the politico social drift of 1848 In April, 1864, Dr Bernacki was appointed medical director of the Germania Life Insurance Company of New York, in which position he remained up to his death A widow and a daughter survive him, while a son, also a physician, and a daughter, died some time ago

J T Wilson, M D of Galesburg, Ill , born in Sweden, Sept 10, 1857, died Nov 27, 1896 The following preamble and resolutions were passed by the Galesburg Medical Society

Whereas, It has pleased Divine Providence to remove from us one of our ablest members,

Whereas, We the members of the Galesburg Medical Society, desire to place upon record our appreciation of the character of our deceased brother, be it

Resolved, That in the death of Dr J T Wilson, the Society has lost a devoted, able and faithful colleague, whose earnestness of purpose and loftiness of motive, peculiarly fitted him for the profession which he adorned

Resolved, That the loss which we thus mourn, is not limited to our Society or even to our city

Resolved, That we most respectfully and sincerely extend our heartfelt sympathy to his family, wishing for them that consolation which is the outcome of his noble life

Resolved, That a draft of these resolutions be spread upon the minutes of the Society and that a duplicate be sent to the city and medical press and that a copy be transmitted to the family of our deceased friend H P Beirne, Sec

MISCELLANY

The Health of the Explorer Stanley —Mr H M Stanley is recovering from a severe attack of gastritis It will be remembered that he was at death's door for nearly a month when he returned home from Lake Nyanza to bring up the Barttelot rear column, that he had another serious illness when he was with Emin Pasha's people, and that he was so ill before his marriage that during the ceremony in Westminster he had to be given a chair In each case gastritis accompanied by recurrence of fever is the cause of illness Mr Stanley is 55

McGill Alumni at New York —The second annual meeting of the New York Graduates' Society of McGill University, Montreal, was held November 10 Among the officers elected for the year were the following The vice presidents, Dr Wolfred Nelson and Dr James A Meek, secretary, Dr W Ferguson, treasurer, Dr H N Vineberg, executive committee, Dr George C Becket The graduates of the faculties of medicine, law, arts, science and veterinary medicine of McGill University, now residents of the United States, number over 500, of whom 50 live in and near New York The society will found a scholarship, to be known as the Sir John William Dawson Scholarship, in memory of Sir John William Dawson, who has devoted his life and energies to making McGill University the leading teaching body in the Dominion of Canada

The Loomis Mountain Sanitarium —The name of the late Dr A L Loomis of New York city is in perpetuity identified with an undertaking for the treatment of incipient phthisis, located at Liberty, Sullivan County, N Y , about four hours' distance from the city At present the following structures are included in the sanitarium Administration building, of stone, 200 feet in length and three stories high, casino, of stone, and four one story cottages The examining physicians are Dr H P

Loomis, No 58 East Thirty fourth Street, Dr C E Quimby, No 44 West Thirty sixth Street, and Dr J E Stubbert, at the sanitarium, who is also physician in charge The sanitarium has been in active operation only since June, and the demand for accommodation has been so great as to necessitate the use of wards originally intended for emergency cases Bedrooms have been arranged in the casino to partially meet the demand The present capacity is thirty one beds

Carriers of Sick Passengers —If a carrier accepts a passenger knowing that he is sick or infirm, the appellate court of Indiana says, in the case of Furgason v Citizens' St R Co, decided *Oct 13, 1896*, *it must use ordinary care to see that he is transported* safely, and is given a reasonable time and proper assistance in getting on and off its cars But it will not be required to accept and transport one having a contagious disease, which might be communicated to other passengers Neither will it be required to accept as a passenger one who is physically disabled and unable to take care of himself A carrier, the court continues, is not bound to turn its cars into nurseries, prisons, or hospitals, or its employes into nurses or jailers Neither is it required to furnish medical attendance, medicines, or other articles necessarily needed by the sick If a person desiring to become a passenger is unable, on account of extreme youth or old age, or any mental or physical infirmities, to take care of himself, he ought to be provided with an attendant to take care of him The carrier is not bound to furnish him an attendant Finally, it is the duty owing from a carrier to all of its passengers alike, whether sick or well, able bodied or infirm, old or young, rich or poor, white or black, to use at least ordinary care in their transportation, and any negligence on its part resulting in injury to a passenger without the passenger's negligence contributing thereto must be answered for in damages

"In the Crowd," a Study of the Popular Mind —M Le Bon lays stress upon the importance to legislators and statesmen of the study of crowds, and after this preliminary he takes his crowd and proceeds to submit it to a masterly dissection He brings out the almost appalling powers which a crowd possesses on account of the irresistible power given by its numerical strength "An isolated individual knows well enough that alone he can not set fire to a palace or loot a shop, and should he be tempted to do so he will easily resist the temptation Making part of a crowd he is conscious of the power given him by numbers and it is sufficient to suggest to him ideas of murder or of pillage for him to yield immediately to temptation " Of course, this feeling may be exerted for objects which are morally or religiously correct M Le Bon cites, among other instances, the Crusaders and this, perhaps, is the most wonderful example of how a crowd can be acted upon Let anyone read the history of the Crusades and mark how all classes set forth from the highest to the lowest, many without arms, food or clothing, how they traversed half a continent and were content to die within sight of the Holy City Such acts show, as perhaps nothing else could do, that crowds, unreasoning, impulsive and essentially feminine as they may be are still capable of the most heroic acts

The Naval Hospital, New York —The overcrowded condition of this institution has been the subject of a careful investigation by the Department of the Navy, and as a result an appropriation of $10,000 has been secured for the erection of three new buildings These buildings, the plans of which have been approved, will consist of a pavilion, the kitchen and laundry and the mess hall and dispensary They will all be connected with the main building by means of corridors The ward building will be erected on the site in front of the present structure, and will be the largest of the new structures It will be two stories in height, and when completed will have room to accommodate 100 patients, beside having quarters for the ward officers and the corps of attendants The building is to be lighted by electricity, and the elevators will be operated by the same power This building, when completed, will be one of the finest in the State for hospital purposes It will cost about $50,000 The other buildings are to be erected in the rear of the old hospital The kitchen and laundry will be situated near the cemetery, and will be the smallest of the new structures The third building will contain the mess hall and a large room on the first floor for the use of convalescents On the second floor will be the dispensary and chapel, while the third floor is to be given over to the operating room Like the first building, the other two will be fitted with all modern appliances The roof of the dispensary building will be fitted with glass to admit light into the operating room The operating room will equal those of the finest hospitals in the country These buildings, with the old ones, will make the naval hospital at this station equal, if not superior, to any connected with the naval stations in the country

New York State Commission in Lunacy —Dr Carlos F Macdonald has resigned the presidency of the above named commission, in order to assume charge of a large private institution in Westchester County He had held that important position under three governors, and his recommendation of Dr P M. Wise to become his successor was influential and controlling Dr Wise, the new president of the commission, has given a quarter century to service of the State and the care of its dependent insane In 1873 he was appointed assistant physician and in 1884 he was promoted to the medical superintendency of the Willard asylum In 1889 he accepted the medical superintendency of the new St Lawrence State Hospital at Ogdensburg The latter institution was conceived in a most enlightened spirit of progress, and was intended to be an exponent of the latest and most approved plans of hospital construction and administration In the seven years of Dr Wise's incumbency, the policy of the hospital and basis of its organization has been completed It is recognized throughout the scientific medical world as a model of convenience and adaptability for its purpose, and has already attained a high reputation as a curative institution Dr Wise thus brings to his new position a mature experience gained in long and active duty in the great department of which he is now the head Dr Wise was highly commended by Dr Macdonald as his successor and the Governor's action in appointing him is most commendable

The Jubilee of the London Pathological Society —On October 20 or four days later than the Boston jubilation over surgical anesthesia, the pathologists of London celebrated the fiftieth anniversary of their society Of the original members only one, Sir Richard Quain, was present, and he reported that besides himself there were now surviving from other charter members, Sir John Simon, Sir William Jenner, Mr Holthouse and Mr Wagstaff Sir Richard Quain said he could recall the meetings fifty years ago and regretted that he was the only original member who was able to be present that night At the first meeting of the society a memorandum was addressed to the profession putting forward the claims for the formation of a pathologic society in London, which should not be behind Dublin and other towns which already possessed such a society. He referred to the original founder of the society, Thomas Bentley, who, however, remained comparatively unknown He commented on the great advance that had been made in pathology since the time when pus was decribed as "a clear fluid containing globules " The work of the society had been well done, as was evidenced by the value as books of reference of the Transactions of the Pathological Society Dr Wilks said he could remember how the proposal to form a society for the study of pathology originated at a meeting held at the house of Dr Thomas Bentley, who at that time lived in Trinity Square, Dr Barlow being in the chair He compared the present position of pathology and morbid anatomy and regretted the tendency to neglect the latter for the former, and more especially the separation of clinical medicine from pathology He pointed out how slow the profession had been to accept views which today were well recognized He alluded to the great value of the work of the Pathological Society and the excellent papers which were to be found in the Transactions of the society During its fifty years of existence many who have since risen to eminence in medicine and surgery have owed their first introduction to the notice of the profession to this society Its published transactions no doubt reflect the gradual evolution of pathologic doctrine, but at the same time they embody the observations of some of the most gifted minds A society whose meetings have seen among the most constant attendants and contributors such men as Jenner, Bristowe, Quain, Peacock, Hulke, Hutchinson, Hilton Fagge, Moxon, Wilson Fox, Bastian, Gawen Sutton, Murchison, Gull, De Morgan, Prescott Hewett, Dickinson, Holmes and Greenhow, to name but a few, must be able to embrace all branches of the science with which it deals, and ought to enjoy perpetual vitality The full address of the president of the society, Mr Henry T Butlin, delivered on that occasion, is published in full in the *Lancet* for October 24

The Flagellate Form of the Parasite of Malaria —Dr R J Marshall, writing from a malarious section of the south of Spain refers to the views of Manson and Ross about the passage of the parasite of malaria into the mosquito before its introduction into the human victim Surgeon Major Ross examined human blood from the stomach of mosquitoes fed on the blood of a malarious patient, in whom crescents were abundant, and he found that crescents after being half an hour inside the stomach of a mosquito were all converted into spherical bodies or flagellate bodies Dr Manson considers that these results strongly support his theory "Living in a district where malaria is at certain seasons very rife, though mosquitoes scarce, I have been unable to make any experiments with blood from the mosquito's stomach, but have by a very simple process observed occurring what Surgeon Major Ross found occurred after blood had been half an hour inside the mosquito's stomach, *i e*, the conversion of all crescents into spheres or flagellates Lately, while examining a specimen of blood rich in crescents, I in accordance with a suggestion made to me by Dr George Thin, placed a drop of distilled water on the edge of the cover of a preparation of the fresh blood In the ordinary preparations of this blood I had found numbers of cresents, but very few spherical bodies, and only one or two flagellates On examining the specimen so treated after a few minutes I found no crescents, but numbers of spheres with more or less movable pigment and also a large number of flagellated bodies I therefore prepared a few specimens by placing a minute drop of distilled water and inverting on it a cover charged with a minute drop of blood I examined this immediately and found that the crescents almost at once became spherical Their pigment granules, previously clustered in a bunch became scattered and movable After a short interval the pigment granules became more and more active, then violently agitated, and soon flagella made their appearance lashing about in the most lively manner In less than five minutes there was not a single crescent to be seen, while I had beautifully displayed to view large numbers of flagellate organisms, to find a single one of which I have often sought in vain in blood fairly rich in crescents The flagellate manifestation lasted for half an hour or more, and the specimens when examined three or four hours later only contained spheres with still pigment or clusters of free pigment granules I also observed that red corpuscles containing small parasites retained their normal color amongst the decolorized corpuscles not containing parasites, and the parasites themselves became swollen and globular and more distinct, with their pigment granules more visible than formerly What bearing these phenomena may have on Dr. Manson's theory I can not venture to say, but only express the opinion that they are due to the imbibition of water by the crescent, and that this may take place as well in the stomach of the mosquito as in any other place where blood containing crescents is mixed with a comparatively inert fluid Anyone desirous of seeing flagellated organisms can thus very soon see them if he only will mix blood containing crescents with a minute quantity of water before making his examination "

Things Experts Can Testify To —The case of Quinn v O'Keefe, in which the appellate division of the supreme court of New York handed down a decision Oct 6, 1896, was an action brought by a physician to recover damages for injuries received in consequence of a collision between the phaeton in which he was driving and a truck alleged to have been negligently driven by the servants of the defendant The vehicles were proceeding in different directions, and according to the evidence in behalf of the plaintiff, they would have passed one another without accident if the truck had continued to move upon the same line as it was moving along when first closely observed by the doctor His fall, there was evidence to show, resulted in a progressive malady of the spinal cord, from which it was reasonably certain that he would never recover The jury returned a verdict in his favor for $8,000, and the above court affirms a judgment entered therefor and an order denying a new trial Numerous points were raised for review As a result the court holds, among other things, that the testimony of the plaintiff to the effect that, in his best judgment, the men on the truck were partially intoxicated, was properly admitted It was proper to receive the evidence which the plaintiff gave as to the difference in his weight before and after the accident Whether the change was due to any injurious effects of the accident or not was a question for the jury It is proper to ask an expert witness what certain symptoms which are exhibited by the plaintiff indicate in respect the part of the body which is affected He does not give additional force to his testimony, nor harm the defendant, by answering when asked whether he can state positively to the jury that, if one or other of two assumed conditions existed it would produce that condition, without speculation and from his own knowledge of the case as a physician and surgeon—that "a physician or surgeon has very little positive knowledge He gives his judgment I can give my judgment in this case That is all " Nor can the court compel an expert witness to give a categorical answer to a question of opinion evidence which the witness says he is unable to answer categorically A hypothetic question is unobjectionable if the assumptions contained in it are within the probable or possible range of evidence It is also proper to ask whether the accident described in the hypothesis is capable of producing such physical results as are ascribed to it And a question is not objectionable which asks whether such a wrench to the backbone as has been described does not sometimes involve some sort of disorganization of the spinal cord or its coverings Probabilities are proper to be considered in reference to an existing physical condition, and it is held that it would be manifestly unjust to keep from the consideration of a jury the expert evidence of a physician that the plaintiff exhibited symptoms which were equally characteristic of two different internal conditions, either of which conditions could be occasioned by the accident which had befallen the patient, simply because the witness was unable to say with certainty which of the internal conditions actually existed Physician or layman can testify as to the change in the plaintiff's appearance after an accident

Louisville

LOUISVILLE CLINI IETY —Th ers of this society
met at the Pende of this c gues Dr J
W Irwin A ss mee

banquet, and election of officers entered into for the coming year A very spirited canvass had been waged by the friends of two members for the presidency, the canvass finally being decided by the election of Dr Irwin Dr George W Griffiths, the retiring president, acted as toastmaster, and the following toasts were responded to "The Clinical Society," Dr T P Satterwhite, "Deceased Members," Dr Peter Gunterman, "Specialists," Dr William Cheatham, "Young Members," Dr F W Samuel, "American Medical Association," Dr Joseph M Mathews "The Future," Dr S G Dabney, "Doctor as a Traveler," Dr August Schachner, "Medical Education," Dr I N Bloom, "Microscopists," Dr Carl Weidner, "Ethics," Dr W C Dugan, "Quackery," Dr W H Wathen, "Professional Writing," Dr J W Irwin Louisville is essentially a city of medical clubs, there being four or five societies which meet once or twice a month, the business and scientific part of the meetings being followed by a collation Several attempts in the past have been made to create a general society, the Academy of Medicine, which lived a year, being a sample, either the absence of a collation or too many societies was the cause of its demise

Kentucky Valley Medical Society —At a recent meeting of this association at Jackson, the following officers were elected for the ensuing year President, Dr B D Cox, Sr,, vice president, Dr B D Cox, Jr, secretary, Dr D B Littlepage

Health Office —The annual report of the Health Officer for the month ending the 28th of November has just been printed The total number of deaths was 223 as compared with 235 for the corresponding month of last year Consumption heads the list with 26 deaths, heart disease 15, pleurisy 11, typhoid fever only 3, a very small death rate from the number of cases there have been in the city, 38 cases of diphtheria were placarded, with 8 deaths, 19 cases of scarlet fever with no deaths, 90 persons were vaccinated by the Health Department, 33 diseased cattle killed and 377 diseased cattle condemned and sent from the city

Medico-Literary Notes

The New York Herald offers the following apology and explanation "Dr William Hirsch, the brilliant German author of 'Genius and Degeneration,' is now traveling in the United States He has a namesake in New York City Both are physicians, eminent each in his own line Both have written books of great scientific value But each is satisfied with his own laurels and unwilling to filch any from his neighbor Last week we reviewed 'Genius and Degeneration' By a curious but not unnatural oversight the portrait of the other Dr William Hirsch, which was filed away for use among its archives, was published with the review Both gentlemen have called our attention to this oversight, which we cheerfully set right, with expressions of the highest regard for both "

The University of Tomsk in Western Siberia.—This university, which has now been in existence about nine years, and consists at present of a single faculty—that of medicine—had, according to a recently issued report, 413 students of whom only 3 were of native parentage, the majority being sons of priests In the year 1895, 64 out of 117 who entered five years previously completed their course, 54 of whom received their diploma as Vrach or medical practitioner Up to the present time the university has educated 151 medical practitioners and is evidently partly supplying a very great want, as in such a sparsely populated country as Siberia medical men are necessarily very few and far between

Dr R W Felkin of Edinburgh, a high authority in African climatology, has written a book in which he discusses the important question, "Can Europeans Become Acclimatized in Tropical Africa?' He is strongly of opinion that it can only be possible if emigration occurs step by step, and its development must be counted by generations not by years The continent of Africa is divided by him into eight divisions, and the natural characteristics of prevalent diseases of each of these divisions are discussed There is a fuller consideration given to such special diseases as malaria beri beri, yellow fever dengue etc The map illustrating the geographical distribution of certain diseases is ingenious, and not being overloaded with details is easily read By placing alongside this a map giving the topographical features of the continent, their relationship to special diseases can be easily seen

THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Nov 21 to Nov 27 1896

First Lieut Benjamin Brooke Asst Surgeon ordered to Chicago Ill, to appear before examining board for examination as to his fitness for promotion

Capt Eugene L Swift, Asst Surgeon, leave of absence granted on surgeon's certifidate of disability is extended two months on account of sickness

Navy Changes Changes in the Medical Corps of the U S Navy for the two weeks ending Nov 28, 1896

Surgeon A F Magruder detached from the marine barracks, Washington, and placed on the retired list, Nov 16

P A Surgeon J S Sayre placed on retired list Nov 16

Medical Director H M Wells, detached from the naval laboratory New York ordered home and placed on waiting orders Nov 18

Medical Director T C Walton detached from the naval academy Dec. 15, and ordered to the naval laboratory

Surgeon C T Hibbett detached from the ' Independence," ordered home and granted three months' leave

P A Surgeon F W Olcott detached from the 'Enterprise" Nov 27, and ordered to the Independence '

P A Surgeon W F Arnold detached from special duty and ordered to the Enterprise" Nov 27

P A Surgeon J M Moore detached from the Texas" Dec 7 and ordered to the Castine" Dec 8

P A Surgeon L H Stone, detached from the 'Castine" Dec 8, ordered home and placed on waiting orders

Asst Surgeon S B Palmer, detached from the ' Vermont" Dec 7 and ordered to the 'Texas "

P A Surgeon P Leach, promoted to Surgeon from Nov 15, and P A. Surgeon T C Craig promoted to Surgeon from Oct 14

Surgeon A G Cabell detached from the ' Michigan," ordered home and granted three months leave

P A Surgeon F J B Cordeiro detached from the ' Constellation" and ordered to the Michigan '

Asst Surgeon L Morris, detached from the naval hospital, Philadelphia Dec 5, ordered to examination for promotion at New York Dec 7, and then placed on waiting orders

Asst Surgeon R G Brodrick ordered to the 'Constellation "

Medical Director T C Walton detached from the naval academy Jan 18 instead of Dec 15, and ordered to the naval laboratory, New York, Jan 19, Nov 24

Medical Director H M Wells detached from the naval laboratory, New York Jan 19 instead of Dec 19

Surgeon W S Dixon detached from special duty in Washington and ordered to the "Brooklyn' Dec 1 Nov 25

Change of Address

McMahon, C Agnes, from Chicago, Ill to 17 Grove Street, Asheville, N C

Carveth C B, from Bloomfield, Neb to 13 and 14 Berkshire Blk, W. Superior Wis

Quales, N T, from 241 Milwaukee Av to 42 Fowler St, Chicago Ill

LETTERS RECEIVED

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ORIGINAL ARTICLES

IDEAL CATGUT STERILIZATION

BY N SENN, M D, Ph D, LL D
PROFESSOR OF PRACTICE OF SURGERY AND CLINICAL SURGERY, RUSH MEDICAL COLLEGE ATTENDING SURGEON PRESBYTERIAN HOSPITAL SURGEON IN CHIEF ST JOSEPH'S HOSPITAL CHICAGO

The aseptic absorbable ligature is one of the greatest achievements of modern surgery In his first communication to the profession on this subject Lister alludes to the advantages of the aseptic ligature as follows "If the antiseptic ligature be employed it merely inflicts a wound or injury upon the vessel, without introducing any permanent cause of irritation The injured part, therefore, becomes repaired after the manner of a subcutaneous wound, without passing through the process of granulation and suppuration, which is induced by the employment of the ordinary septic ligature" Perhaps no other surgical procedure has ever enjoyed the confidence of the entire profession throughout the civilized world to the same extent as the aseptic ligature The universal faith in the reliability and safety of the aseptic ligature is only a natural outgrowth of the superior results following its use Protracted suppuration in wounds the result of retained ligatures, secondary hemorrhage, and suppurative inflammation of vessels, have been gradually diminishing in frequency, and bid fair under the influence of the aseptic ligature to be almost completely expunged from the future category of wound complications Nussbaum very appropriately remarks "Catgut is without doubt Lister's greatest discovery" And again "How pleasant it is to cut the ligatures short and leave them unconcerned to their fate in the wound! In ovariotomies, etc, their value can not be overestimated The cases in which catgut adheres to an artery, forming connections with it and the surrounding tissues, assisting at the same time in forming a firm ring around the coats of the artery, are exceedingly welcome occurrences, guarding against secondary arterial hemorrhage in ligating in the continuity of a vessel, and rendering even the application of a ligature in close proximity to a large collateral branch void of danger All this silk can not do" The advantages of the aseptic animal ligature are now generally recognized Lister's crude method of rendering catgut aseptic has been variously modified during the last quarter of a century Different methods have been devised and nearly all of the antiseptic substances have been employed in the preparation of catgut The very fact that so many different methods of preparation have been employed is the very best and most convincing proof that none of them have proved entirely satisfactory Kocher abandoned the use of his juniper catgut Carbolized, sublimated and chromicized catgut have been used very extensively, but every surgeon knows from actual experience that not infrequently wound infection could be traced to imperfect sterilization of the material Dry sterilization of catgut seemed to become the general procedure a few years ago, but extensive trial has shown that it can not be relied upon in rendering the material absolutely safe for practical use The many failures of catgut as an aseptic suture and ligature, as heretofore prepared, are responsible for the substitution of silk for catgut in the practice of many surgeons Silk can be readily sterilized by boiling, the simplest and quickest method of effecting absolute sterilization

The ideal sterilization of catgut consists in rendering the material not only absolutely sterile but also mildly antiseptic without impairing its tensile strength Every surgeon has been anxiously looking for a method by which catgut could be prepared so that it could be sterilized by boiling without impairing its strength Fortunately this hope has at last been realized Experiments have shown that catgut and leather immersed for forty-eight hours in a 2 to 4 per cent solution of formalin undergo an unknown chemic change which alters their texture in such a way that its tensile strength is not impaired but rather increased by boiling The commercial catgut is subjected to the action of the formalin without any previous preparatory treatment of the raw material

Hofmeister, who has done such excellent service in perfecting the formalin preparation of catgut, gives the following most recent method 1 The catgut is wound on a glass plate with slightly projecting edges, so that the gut is free from the sides of the plate and exposed to the circulation of the boiling and flowing water The ends of the gut are fastened through holes in the plate 2 Immersion twelve to forty-eight hours in aqueous solution of formalin 2 to 4 per cent 3 Immersion in flowing water at least twelve hours to free the gut from the formalin 4 Boiling in water from ten to thirty minutes Ten to twelve minutes is amply sufficient, as all microbes and spores are killed by exposure to boiling heat for that length of time 5 Hardening and preservation in absolute alcohol containing 5 per cent of glycerin and one-tenth of one per cent of corrosive sublimate

Experiments on animals with catgut thus prepared have proved that it is absorbable, though not as quickly as the ordinary material One of the essential conditions of success in this method of catgut sterilization is to wind the gut quite tightly around the glass plate or hollow glass cylinder during the process of sterilization

The first attempts to sterilize catgut by this method under my own direction were made at the St Joseph's Hospital by the sister in charge of the operating room The result of experience has led us to modify the procedure in several ways Instead of glass plates ordinary abdominal glass drainage tubes have been employed, upon which the gut is wound quite tightly These glass drains have been found an excellent substitute for the plates An ordinary large test tube would answer the same purpose The remaining directions given by Hofmeister were followed to the letter Numerous inoculations with fragments of catgut prepared by this method in sterile gelatin invariably gave negative results The catgut is as strong as the raw material, hard and the knot is less liable to slip than when the ordinary material is used We have also ascertained that the formalin catgut can be reboiled almost any number of times without impairing its strength

Catgut to be safe should not only be absolutely sterile but should contain a sufficient quantity of efficient antiseptic to render it unfit as a culture medium for pathogenic microbes Hofmeister renders it antiseptic by immersing it in an alcoholic solution of corrosive sublimate Others have substituted carbolic acid for sublimate Both of these antiseptics unduly irritate the tissues and increase the primary wound secretion, effects which can not fail in interfering to a certain extent with an ideal healing of a wound by primary intention The valuable and interesting experiments made recently by Lauenstein leave no doubt that it is almost next to impossible to render the field of operation absolutely aseptic by any of our present methods of disinfection We are forced to admit that nearly every wound inflicted by the surgeon's knife contains some pathogenic microbes notwithstanding that the strictest aseptic precautions may have been carried out The experiments made by Ewald have also furnished positive proof that sterile catgut often contains a sufficient quantity of an unknown toxic substance which by its destructive action upon the cells engaged in the reparative process transforms them into pus corpuscles resulting in the production of a limited aseptic suppuration and the formation of sterile pus Undoubtedly many of the stitch abscesses which occur in the practice of painstaking aseptic surgeons have such an origin These experimental researches force upon us the conclusion that catgut should not only be sterilized but that it must be made sufficiently antiseptic to at least inhibit the growth if not destroy the pyogenic microbes which enter the wound during the operation or which may reach it later through the circulation In this part of the preparation of catgut I have modified Hofmeister's method by substituting for the corrosive sublimate iodoform After boiling the deformalinized catgut for twelve to fifteen minutes it is cut into pieces of desirable length, tied into small bundles containing from six to twelve threads, when it is immersed and kept ready for use in the following mixture Absolute alcohol 950, glycerin 50, iodoform (finely pulverized) 100 The alcohol dissolves part of the iodoform The bottle containing the catgut should be closed with a well-fitting glass cork and should be shaken well every few days to bring the dissolved iodoform in contact with the threads The catgut can be kept in this mixture for any length of time without losing its strength One of the valuable properties of iodoform applied to a recent wound is to diminish the amount of primary wound secretion It does not destroy pus microbes but inhibits their growth I have used catgut prepared by these modifications of Hofmeister s method with the most satisfactory results and shall continue to use it until some better method is devised

In conclusion I would advise hospital authorities and surgeons to prepare their own catgut by this or similar processes and not rely upon manufacturers for their supply

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THE OCCURRENCE OF LUPUS VULGARIS IN THE WIFE AND DAUGHTER OF A TUBERCULOUS SUBJECT.

Read in the Section on Dermatology and Syphilography, at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY JAMES MACFARLANE WINFIELD, M D
BROOKLYN N Y

Allow me to make a quotation from Kaposi[1] as an excuse for the following paper "No experimental proof has been offered that characteristic lupus vulgaris can be produced by inoculation of tubercle bacilli The inoculation of lupus tissue and of the bacilli derived from it has given rise to inflammatory products, but not to lupus, nor has any clinical proof been found, unless we accept extremely careless statements This is less true concerning a few published cases such as that of Besnier (lupus in a vaccination scar), Sachs (lupus after piercing the ear), etc These and other similar, although less carefully observed cases, might demonstrate the occurrence of clinical lupus from inoculation of tubercle bacilli "

The cases to be related are not experimental proof, but rather examples of clinical lupus from probable inoculation of the tubercular germ There is very little, if any, reason to consider one of the cases (the child) to be of spontaneous origin, while in the other there is none whatever

To make the evidence of inoculation more convincing, a brief history of the tubercular subject will be necessary

J C, a native of Ireland, of his family history very little could be ascertained He believed his father died of consumption The cause of his mother's death is not known The same is true of two sisters who died when he was a boy The patient was a healthy young man Denied ever having had gonorrhea or syphilis Married when he was 20 years of age He drank a considerable amount of intoxicants since puberty, although not to excess until health began to fail, when he was about 25 years old At that time he noticed shortness of breath and an annoying hacking cough A year and a half before his death he had an attack of synovitis of the knee, lasting about six months, resulting in a stiff joint After that his health began to fail very rapidly and he was unable to work at his trade, that of carpenter At this time the diagnosis of "lung trouble" was made He gradually became worse until he succumbed, at the age of 32 from an attack of acute pneumonia According to the statement of his wife, the cause of death on the certificate was pulmonary phthisis and acute pneumonia During his illness the patient was very care less regarding personal cleanliness He generally preferred to expectorate on the floor rather than in the cuspidor He was also in the habit of wiping his lips, after coughing, on the towel used by his wife These, with other dirty habits, would make the inoculation of tubercular germs very possible, and as the subsequent history showed, there seemed to be no doubt but that this man, suffering from pulmonary tuberculosis, could easily have been the means of inoculating his wife through the medium of a contaminated towel, and also his child, who was creeping about the floor, from the contact with expectorated matter. Twelve years have elapsed since this man died, but there is no doubt about the correctness of the clinical history, as the utmost care has been taken to verify all the facts.

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[1] Disease of the Skin Kaposi

Case 1.—Mrs. J. C., widow of the above, aged 46, native of New Jersey, but of Irish parentage, family history good. No evidence of syphilis or tuberculosis, except that a maternal uncle died at an advanced age of "slow consumption." Personal history: Health always good; married at 22 years of age. She has had three normal labors and three miscarriages, all of the latter resulting from injuries of some sort, the nature of which is immaterial. The first child, a boy, lived to be about 4 months old, when he died from acute enteritis. Second, a girl, died from diphtheria at 1½ years of age. The third, also a girl (Case 2), is still living (September, 1895). When Mrs. C. was about 30 years of age and about three months pregnant with her last child (this being about four years before the death of her husband), in wiping her face with the family towel she rubbed the scab off an insignificant sore on the tip of her nose. This slight excoriation failed to heal and soon assumed a nodular and warty appearance. It slowly spread until all the cutaneous covering of the nose became involved. The accompanying photograph, No. 1, taken January, 1895, shows the amount of destruction present. The center of the diseased area was the site of characteristic irregular scars, while around the margins there were nodules, ulcerated patches and crusts. Bacteriologic examination of tissue taken from some of these nodules, demonstrated the presence of anatomic tubercle and one or two tubercle bacilli. The operation consisted of curettage and cauterization with creosote. After healthy granulations appeared the denuded parts were covered with skin grafts, and a fair result was obtained.

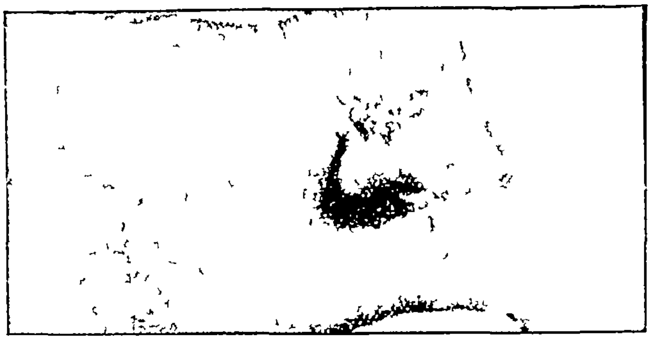

FIGURE 1.

Case 2.—Mattie C., aged 15, native of the United States, last child of Mr. and Mrs. J. C. She was perfectly healthy at birth, remaining so until she was about 2½ years of age, which was two years before her father's death. She then crushed the soft parts of the second finger of the right hand; the bruise and torn skin healed after a few weeks under applications of home remedies; six months later the joints of this finger began to enlarge and finally suppurated. One year after the primary injury, the diseased phalanx and the metacarpal bones were removed. Her health was very much impaired, and in addition to the almost certainly tuberculous finger there appeared an eczematous like eruption on the ears, eyelids, lips and nose. The remedies applied cured all of the patches except the one on the upper lip, that gradually changed its character, became indurated and nodular, spreading upward toward the nose, and finally destroyed the cutaneous covering and the nasal cartilages. Healing took place in some parts, leaving extensive cicatrices. New nodules were constantly forming, which in turn would break down. For nearly thirteen years the skin affection had never been entirely cured. The physician consulted had treated both mother and child with antisyphilitic remedies, from which no benefit was derived in either case. The tonics given to the child however, improved her general condition. She continued in fair health until puberty, about her fourteenth year. The changes incident to that period seemed to aggravate the lupoid process. At this time, she first came under the observation of the writer. The accompanying photograph, No. 2, was taken before any attempt at operation for the cure of the disease or relief of the deformity was made. As will be seen by the picture, the disease has involved nearly all the cutaneous covering included in a line drawn from below the eyes across to one just anterior to the ears, down to a point over the thyroid cartilage. Much of this area was filled with scar tissue, and in some parts there were numerous bright glistening nodules deeply imbedded in the tissue, some of which had broken down and were covered with crusts. The lips were thickened, the angles of the mouth were obliterated, the mouth itself was greatly contracted. The inside of the lips were filled with scar tissue; the roof of the mouth, the floor of the nares, the pharyngeal vault, were filled with crusts and ulcerated patches. The upper incisor teeth had dropped out, from the destruction of the alveolar process. The bones of the ring finger of the left hand were thickened, presenting all the appearances of bone tuberculosis. The operation (in the latter part of March, 1895) consisted in scraping out all the nodules and ulcerated patches, afterward cauterizing with caustic solution of peroxid of hydrogen. The mother refused to have the diseased finger amputated. The patient made a good recovery and left the city for the summer. In September of last year she submitted to a plastic operation for the relief of the mouth deformity. The finger became more diseased; a sinus had formed, from which necrosed bone and cheesy particles were discharged. The removal of the finger being still objected to, my assistant, Dr. Napier, curetted the sinus and removed all the dead tissue possible, finally packing the cavity with iodoform gauze. The wound rapidly closed and remained so for three months; the face and mouth presented a good appearance; there had been no recurrence of the disease in the parts operated on in March, although there were three or four nodules over the left temporal region, and one larger in the side of the neck. These were curetted and a plastic operation was done on the angles of the mouth which, when healed, gave her a useful and fairly presentable organ. Physical examination gave dullness in the apices of both lungs with changed respiratory murmurs over the whole left side. About Christmas, 1895, she developed a cough, shortness of breath and night sweats, and lost flesh rapidly; in fact, all the symptoms of pulmonary phthisis were then present. Examination of the lungs showed the presence of a cavity in the left side, and consolidation of the right apex. The face and mouth had remained healed, except that a small portion of the engrafted skin at the angle of the mouth had broken down and was ulcerated. The diseased finger having become a source of great annoyance, on account of the pain and discharge, the patient insisted on its removal. Her general condition being so bad we hesitated about amputating, but finally consented and performed the operation. The amputation wound made a good recovery. Her condition grew rapidly worse, and on the morning of April 10, she succumbed to the pulmonary disease. Autopsy was refused; but from the physical signs there is no doubt regarding the cause of death.

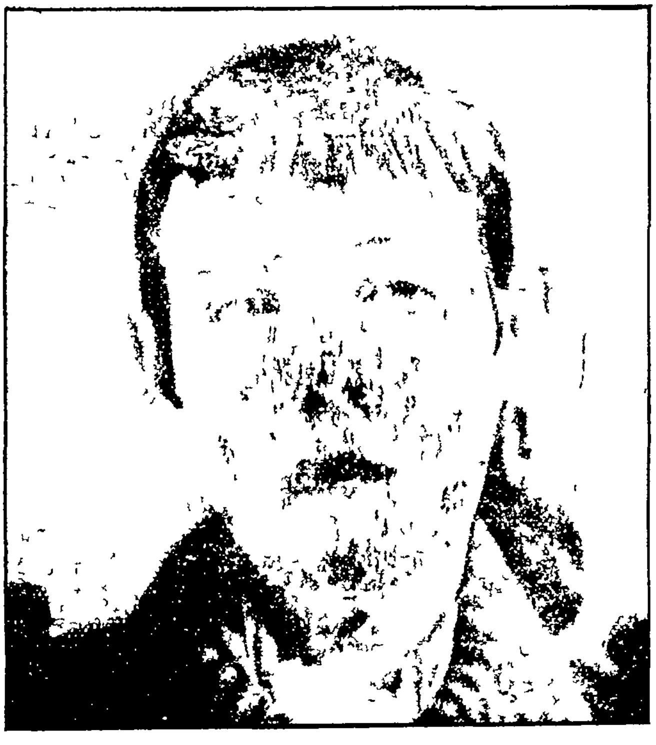

FIGURE 2.

Microscopic examinations of the nodules and portions of the skin removed at each operation, as well as the sputa, showed the presence of the anatomic tubercle and tubercle bacilli the latter varying in quantities From the clinical symptoms, the bacteriologic examinations and the ineffectul results of antisyphilitic treatment, there appears to be no doubt of the disease being true lupus vulgaris The source of infection seems as certain in these cases, as it does in those reported by Besnier, Wolters and others And as such they may be of some little value in further study of this interesting disease

NOTE —Since the above was written Prof Joshua VanCott has submitted a partial report of the findings in specimens from the cases He says "Great difficulty was experienced in getting the tissues (finger) decalcified, but finally sections were obtained which revealed the typical structures of tubercle, many epithelial cells, and small round cells in a connective tissue net-work, with areas of coagulation necrosis and giant cells whose nuclei were characteristically arranged around the peripheral portions of the cells from the findings I hope to be able to stain the tubercle bacilli" [bacilli were found in earlier specimens —J M W] "In the event of not finding them, the histology taken in conjunction with the definite clinical history render it certain in my opinion that these ulcers were tubercular"

1273 Bedford Avenue

FURTHER OBSERVATIONS ON URTICARIA

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY T C GILCHRIST, M R C S (Eng), L S A (Lon Eng)

ASSOCIATE IN DERMATOLOGY JOHNS HOPKINS UNIVERSITY HOSPITAL CLINICAL PROFESSOR OF DERMATOLOGY AT THE BALTIMORE MEDICAL COLLEGE AND WOMAN'S MEDICAL COLLEGE OF BALTIMORE

In a paper which I read before the last meeting of this ASSOCIATION in Baltimore I gave the results of some experimental observations on the pathology of urticaria A brief account of these results would not be out place before discussing the present paper I mentioned that the cases chosen were those of urticaria factitia Wheals were produced artificially by drawing down the finger nail sharply over the skin and small portions were excised at definite periods after stimulation, viz , at two minutes, five minutes, eight minutes, ten minutes, fifteen minutes, twenty-five minutes, forty minutes and sixty minutes, the results obtained were particularly interesting in that the whole pathology could thus be followed out in detail It was found that in fifteen minutes after stimulation a complete picture of acute inflammation of the whole derma was presented by these sections There was an extensive emigration of polynuclear leucocytes, exudation of serum, small quantities of fibrin, particularly in the neighborhood of the vessels, pronounced dilatation of the lymphatic vessels and a large number of lymphoid (morphologically speaking) cells around the blood vessels, whereas the epidermis remained practically normal

My present paper concerns observations of three additional cases of urticaria factitia and the examination of spontaneous wheals together with the application of improved technique In the three cases of urticaria factitia with which I experimented I excised portions of the wheals fifteen minutes after stimulating the skin, because it was found in previous cases that the results obtained were particularly pronounced at that stage In all three cases the sections showed again the typical picture of acute inflammation of the skin, but some were more pronounced than others There was not only extensive emigration of polynuclear leucocytes but always an increase in number of the lymphoid cells, and what is rather extraordinary, an apparent increase in the number of the *mastzellen*, which were stained after Unna's method Other factors present in the sections were pronounced dilatation of the lymphatics, the presence of fibrin and a large amount of serous exudation Nuclear fragmentation not only of the polynuclear leucocytes was observed, but even of the fixed connective tissue cells, a point which was brought to my attention by Dr Welch This phenomenon of fragmentation seems to indicate the presence of an irritant of some kind in the tissues in the area of the wheal

In connection with the *mastzellen* I used a slight modification of Unna's stain He recommends that after staining the sections in his polychrome methylin blue solution that they be discolorized with his glycerin-ether mixture The latter I was not able to obtain, so I used a very weak acid solution of alcohol and decolorized carefully for a few seconds, alternating with water The results obtained showed a most satisfactory and double staining of the *mastzellen*, the granules of which were red and the nucleus blue

The observations on the spontaneous wheal of about two hours' duration showed practically the same results in an acute inflammation of the whole derma

My experimental work on these three additional cases of urticaria factitia and one case of spontaneous wheal have confirmed my earlier observations on the pathology of the wheal, viz , that it is a true inflammation of the skin

We now come to the consideration of the cause of the wheals, either arising spontaneously or produced artificially, and here a question at once arises, viz What is the irritant which causes a wheal to appear and where does it come from? The fact that not only an acute inflammation of the whole derma occurs when a wheal is produced, but that there takes place nuclear fragmentation of the emigrated polynuclear leucocytes and even of the connective tissue cells clearly suggests that an irritant of some kind must have been brought to this region

The explanation that it is due to stimulation of the vasomotor nerves is not at all tenable, because the factor of simple dilatation of the blood vessels resulting from stimulation of these nerves would not cause inflammation and certainly not fragmentation of nuclei, neither was the injury produced by the finger nail sufficient to cause these results, as was proved by control experiments in previous cases

Dr Welch made a valuable suggestion to me while examining my specimens He thought that there must be a toxemic condition of the blood at the time wheals could be produced and that some of the toxin was set free into the tissues of the derma, thus constituting a sufficiently acute irritant to set up inflammation with the accompanying marked nuclear disintegration After due consideration it appears to me that this theory will explain all the phenomena of urticaria and its accompanying wheals, not only in the factitious form, but also in many other varieties of urticaria

I mentioned also in my previous paper that indican or some of its salts were present in large quantities in the urine of some of the cases of urticaria factitia which I examined, and since this would point to the presence of proteid decomposition in the intestine, it might be possible that the toxin in some of the cases was of a chemic constitution This theory would also explain why it is that saline purgatives relieve acute attacks of hives so readily by expelling the toxin poison It does not necessarily follow that one kind of toxin alone is the producer of wheals, but, as is well known, certain drugs will sometimes produce them, *e g*, quinin, tartar emetic, etc, and the decomposition products from certain fruits, *e g*, strawberries, etc

I examined lately a typical pronounced case of urticaria pigmentosa, which I exhibited before the Johns Hopkins Medical Society, and as almost always occurs in this disease wheals could easily be produced I excised a number of these wheals at certain periods of time, viz, at four minutes, eight minutes and fifteen minutes, as well as a portion of the skin The results show that even in the eight-minute sections the *mastzellen* were increased in number in the neighborhood of the vessels This latter observation I should wish to confirm by further experiment before I would give as being final A few polynuclear leucocytes were also observed and a pronounced quantity of serous exudation

Unna made the suggestion that the increased number of *mastzellen* found in wheals might come from the blood but he did not prove this important fact

In conclusion I now quote a sentence from Prince Morrow's system of genito-urinary diseases and syphilology and dermatology (1895) written by Dr E B Bronson which is as follows "Though urticaria has been commonly classed with inflammation there is little more reason for this than for regarding a simple rubor or a mechanical edema as inflammatory" I have found, and my statement is supported by Dr Welch, that in all cases of urticaria which I have examined, eight in number, I have seen a typical picture of inflammation which varied in severity I have chosen for my work the most pronounced cases because the results were most marked and more easily studied There is no doubt then that all varieties of urticaria must be classed as inflammatory affections, as Duhring has done in Vol I of his last addition on cutaneous medicine and surgery

Unna's theory of spasmodic contraction of the muscular coat of the veins situated in the deeper portions as the cause of the production of the wheal is not at all acceptable and appears distinctly improbable, judging from the standpoint of the causes of inflammation, and also does not agree with my observations, which proved rather the contrary, viz, that the veins were dilated

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EXCISION AND SKIN-GRAFTING FOR TUBERCULAR DISEASE OF THE SKIN

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8 1896

BY M B HUTCHINS, M D
ATLANTA, GA

I have only a few words to say upon this subject My experience is limited to two cases, and these are naturally insufficient for the formation of an opinion as to the merit of the method Given a localized tubercular lesion of the skin, of not too great area, the pathologic condition would seem to justify the suggested treatment Actual metastases, as in "cancer," are not to be expected, neither do we anticipate such an insidious creeping along the lymphatic channels We do have a localized inflammatory condition, with tubercular structure and usually few bacilli

The ordinary treatment is slow and generally painful In lupus vulgaris, especially, the scar often presents a recurrence of the disease If we can, under thorough antisepsis and asepsis totally remove the disease, without infection of the wound with the tubercle bacilli, and then by grafting minimize the resultant scar we have a method superior to the old

Surgeons and some dermatologists recognize the value of excision, but I believe the procedure unpopular with the majority of dermatologists Thorough excision, with care not to re-infect the wound surface, followed by proper grafting should enable us to end the treatment of a not too extensive case within two weeks Ordinary methods, especially in lupus vulgaris, often occupy years White, in advocating excision, says that the bacilli may finally find their way to vital organs if the local disease persist too long Here it might be asked if the general tubercular condition certainly has its origin from the local lesion or are not all the tissues, in cases ending thus, in so favorable a condition for the bacilli that they receive them just as easily through other channels?

My two cases were treated at my clinic at the Atlanta Medical College The first was that of a mulatto girl aged 15, with a history of suppurating tubercular glands in the neck, for a year, which finally healed about a year before the appearance, five years ago, of the disease upon the lip The lesion was upon the surface of the left segment of the lower lip, being about the size of a silver quarter, occupying nearly half the thickness of the lip It was an ordinary lupus vulgaris, with fine nodules, covered with thin scales, save in the center which was crusted and papular There was a marked, firm, red, raised border

The patient was anesthetized and as strict asepsis as practicable was employed The button "point,' of the Paquelin cautery at a dull red heat was used to cauterize the tissues diseased and kill the bacilli The entire patch was then carefully dissected away, allowing sufficient margin of healthy tissue, and to the depth of about one-half the thickness of the lip Small grafts were then taken from the previously prepared thigh, and properly applied About 80 per cent of these lived A few more grafts were applied two weeks later, to points left vacant by the slipping of some of the first The success of the treatment was vitiated by some error in asepsis in later dressings After some weeks a faint vesicular point was noticed at the inner edge of the healed surface, but this soon disappeared spontaneously There was also a tendency to keloidal growth of the cicatrix, but secondary contraction soon relieved it

My second case was that of a white boy of 12 years, in a poor general condition Occupying the dorsum of the right wrist was an oblong, transverse, flabby, irregular ulcer with an unhealthy base and soft, indolent pale, undermined edges—in short, the lesion formerly described as a scrofuloderm I believe the duration of the disease was over a year

Under anesthesia and with asepsis, a free incision, well outside the margins of the lesion, ovally, without lifting the knife, was carried around the diseased tissues A clean dissection was then made from the annular ligament, care being had not to allow the lesion, or anything which had been in contact with it, to touch the wound Large grafts were shaven from the skin of the thigh and applied in the usual manner The grafting was a failure, but a good, flexible scar was obtained In addition to the usual dressings, a splint was used to restrain motion

Inability to see or hear from my patients directly, prevents my reporting their present condition The first case seemed cured when seen two or three months after her discharge, the second is said to have had a "recurrence" in the scar

My two cases simply demonstrate what I believe to be the proper method of operation, while they also constitute a warning as to the absolute necessity of thorough asepsis both at the operation and in the after-dressings The second case also needed considerable preparatory treatment, which our haste to operate too often causes us to neglect

Excision without grafting is not so promising as the two combined but perfect technique and extreme care in the later dressings would obviate much of the danger of future trouble in the cicatrix We hope with grafting to get a minimum of granulation, and, later, scar tissue, which offers a minimum of liability to recurrence

The cutaneous tuberculoses being now classed in one group, we can well generalise in their discussion, with a special allowance for the marked tendency of lupus vulgaris to return in its scar tissue

NOTE —The lupus patient was seen a few months after this paper was read A young brother had died of tuberculosis meanwhile The site of operation showed entire cure of the lupus The cicatrix was still a little nodular and pigmented, though smoothing and whitening at edges The fine hair included in grafts from leg had become long and coarse She declined their removal by electrolysis The final result in this case is satisfactory

311 312 Fitton Building

SYPHILIS SUCCESSFULLY TREATED BY HYDRIATICS

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Georgia May 5 8 1896

BY ELMER LEE, A M , M D , PH B

VICE PRESIDENT AMERICAN ACADEMY OF MEDICINE CHAIRMAN SECTION ON STATE MEDICINE AMERICAN MEDICAL ASSOCIATION CONSULTING PHYSICIAN CONVENT OF THE SACRED HEART

CHICAGO ILL

There is, perhaps, no disease whose character is so black, and whose ravages are so universally distressing as that under consideration The name syphilis strikes terror into the soul of its victim, and measureless encertainty in the mind of the professional attendant upon whose shoulders the responsibility of treatment is placed

The exact origin of syphilis is uncertain The records do not clearly establish by whom or at what time in the history of the world the disease was first discovered There has been much discussion concerning this point, but little satisfaction has resulted It is the common habit of Europeans to associate the disease with the return of the followers of Columbus, in 1493, from their discoveries of the West Indies However this may be, without the shadow of a doubt, the same disease must have existed centuries before among the races of the Orient The first record of syphilis in France dates only to the siege of Naples, in 1494

Syphilis is spread by direct contagion upon an abraded surface or a breach in an exposed membrane or tissue, and thereby contaminating virus enters the system A period of variable duration between the inception by contact and the lesion follows It may be a few days, or it may be weeks before the systemic exhibitions appear Two reasons may be assigned for the variability of incubation, viz , the virility of the poison and the susceptibility of the individual As in other diseases, there are some people insusceptible to syphilitic virus

The precise nature of the infecting virus has eluded the researches of scientific processes of determination It is an open question whether the serious poisoning which results is caused by a direct entrance of the contagion into the circulation or whether it is by reason of the secondary absorption of the product of the initial ulcer For my part it is not possible to decide the question, but fortunately the practical treatment of the disease does not depend upon this mooted point The answer to the problem is, probably, that both influences together produce the result

The first manifestation of syphilis appears in the form of macule or papule upon some mucous or skin surface The lesion may extend quickly to the deeper tissues and viscera During the period of healing of the initial lesion the disease is regarded as in the first stage The subsequent appearance of surface and other lesions constitute the second period of syphilis If there are still subsequent exhibitions at some later time, usually measured by years, such a manifestation establishes the third period of the disease

One invasion of the body generally precludes a second The disease may be transmitted by the secretions of a sore upon any part of the body within and during the earlier stages The power of transmission during the third period of the disease is regarded as unlikely, although there are some differences of opinion on this matter It is, further, reasonably decided that the normal secretions of the body, such as saliva, mucus and other fluids do not transmit the disease But in the first stage of syphilis the blood as well as the material from the initial lesion may infect another person Some investigators have asserted that a germ has been found constantly associated with the blood during the earlier stages of this disease This position can not be accepted as it has not been substantiated As in some other diseases, the symptoms of this are similar to those of certain other forms of toxemia But it is undoubtedly true that syphilis is due to a definite and specific contagion The blood is poisoned thereby and a series of mild or severe disturbances of the health ensue in a somewhat regular order The principal changes that occur, according to Virchow, begin by the production of a small-celled solid growth, which at first resembles granulation tissue, but which soon shows a vesicular occlusion with consequent degeneration This statement is, to me, one of the most important in the pathology of syphilis If studied according to the light of experience and analogy it has the significant indication pointing out the requirements for treatment Variation in the caliber of the minutest channels through which the circulation is carried forms the earliest pathologic manifestations in internal diseases The recognition of this fact is of the greatest significance in the direction of a correct understanding of the truth concerning pathologic conditions Alterations in the size of the vesicular spaces produce either congestion or hyperemia, either state producing destructive changes in the delicate cell structures Should the disturbance in the circulation occur in the cells of a vital organ the influence upon the whole body will be proportionately serious If at the same time the resisting power of the general system as well as the special locality in which the lesion occurs should be of low vitality, great structural changes necessarily occur within short periods of time

In the treatment of syphilis there is always one imperative indication, namely, sustaining the natural resisting forces against auto-infection Upon the weakened and demoralized system disease preys rapidly and furiously It is more important to preserve the integrity of the individual by supplying it with natural nutrition and relieving it of the occlusions in its neighborhood than it is to attempt to overwhelm the circulation by some extraneous and poisonous material with the view of neutralizing a virus of disease It is a serious question whether an organic or inorganic chemic substance pervading any part of the living tissue structures, is able to be neutralized by the introduction of another chemic agent The various organic aud inorganic matters used for the treatment of syphilis is based upon the supposed property of a matter to destroy or antagonize another It is easy to produce a definite reaction under favorable conditions in a physiologic or chemic laboratory when we know the exact nature of the materials with which the experiment is conducted, definite reactions however, in living structures are not possible

The influence upon the contagion which enters the circulation from without, by the fluids and solid elements of organized living tissues, can not be definitely determined by scientific methods Moreover, when a given mineral or vegetable reagent enters the stomach, and during its passage through the system, it is lost to the senses of the scientist, consequently whatever reactions there may be are determined by no reliable data It was recently stated by a clinician who gives nearly all his time to the treatment of syphilitic manifestations, that up to the present moment the materia medica offered but two agents with which to control the symptoms of this disease Fortunately, indeed, it would be did the materia medica possess so many as two remedies which could, in truth, cure syphilis Every physician whose experince has been even moderate, knows that mercury and iodid of potassium are not able to cure syphilis, all that may be said to the contrary notwithstanding The philosophy of a cure of the impaired tissues by further impairment of that tissue is allopathy, but it is not true to nature It is necessary to do more than conform to the theory included within the confines of a name Syphilis is not curable by the alleged principles of "allopathy," or the infinitesimal folly of homeopathy, or by the vagaries of the eclectics If the disease is curable the remedial forces of that inherent tendency for good which resides in every vegetable and animal cell are able, when properly aided, to conquer against its enemies

By reference to one of the most recent reviews concerning the latest improved treatment of syphilis, the following remedies are advocated as essential The list comprises blue pill, gray powder, gentian, quinin, iron, opium, alum, chlorate of potash, jalap, gamboge, epsom salts, green iodid of mercury, perchlorid of mercury, iodid of potassium, perchlorid of iron, red iodid of mercury, tannate of mercury, sarsaparilla, antimony, aromatics, iodid of sodium, iodid of ammonium, carbonate of ammonia, tartarated iron, bitter infusions, arsenic, iodid of mercury, iodoform, bromid of potassium, bromid of sodium, bromid of ammonium, strychnin, cod-liver oil, mineral acids, vegetable bitters, sulphur, calomel, black wash, carbolic acid, ointment of ammoniated mercury, ointment of oxid of zinc, mercurial ointment, mercurial vapor bath, borax, chromic acid, permanganate of potash iodoform ointment and atropin Of this bewildering array of anti-syphilitic soldiers, how is the young doctor to discover who is general and which are privates? The life of the doctor is too short to examine each remedy and calculate its value The numerous remedies really constitute a disadvantage to the patient as well as to the doctor The choice of the materia medica will be determined very largely by the number of years since the year of graduation The lectures emphatically encourage the necessary use of mercurials, and with this recommendation in mind the young medical man feels consciously strong in his ability to treat syphilis He is encouraged to think that while there is difference of opinion concerning the use of medicines in the treatment of whooping cough and measles, that the profession is a unity in its approval of mercurial treatment of syphilis When a few cases have been entrusted by chance or some other influence to his care, doubts will come into his mind and his security will be undermined In what way is syphilis pathologically and radically different from other functional and organic diseases that it may not be cured? There are conditions which we frequently see that are quite incurable, both in this and in other diseases The degenerate tendency becomes stronger than the resistance of the cells can endure and the natural termination of such cases is fatal Other cases are incurable because of the utter wilfulness and disregard of reason by the patient

The experiences of the profession clearly show that the natural termination of this disease is toward recovery The disease may be light or otherwise and in either case complete restoration often takes place, either with or without professional treatment It would seem to show that if a single case of either mild or severe syphilis recovers without treatment, that the restoration is solely due to the principle of inherent preservation of cell integrity through a natural agency My line of experience has taught forcibly the lesson that vitality maintained through physiologic and hygienic management is a scientific, a safe and satisfactory treatment of syphilis in the earlier stages In the last stages, when the forces of life are sadly weak and declining, it is worse than useless to hope for honest relief through the administration of organic and inorganic substances It is, perhaps, rash to controvert the position of the general profession in its attitude favoring the use of mercurials in the treatment of syphilis, and it would have been unnatural to an orthodox medical education prior to the last third of my medical career But it matters not, rash or otherwise, the only concern of the physician is to know the truth, and if syphilis can be successfully treated by hydriatics, is it not a worthy triumph? The treatment of syphilis by water as the principal remedial agent, is not so simple or so well known as the agent itself would seem to indicate Neither is the method mysterious or devious But it must be mastered and experience will teach more than may be learned from a study of the brief literature on this subject

My attention became attracted to hydriatics, as a successful method of treating syphilis through the necessity of personal responsibility in the treatment of this disease My position has been gained by actual clinic experience

There came to my office in the spring of 1895 a negro, George F , age 25, single, waiter, who applied for relief on account of phimosis The symptom which led him to consult me was inordinate accumulation of smegma Circumcision was done and the case disappeared from my observation Perhaps, a month later the patient appeared again to exhibit an ulcer located on the dorsum, at the point where the division had been made This ulcer was enormous before it healed and was characteristic in every particular Finally it healed and some weeks subsequent to its cicatrization the negro returned with unmistakable secondary symptoms of syphilis The rash was typical, the knees and ankles were swollen and painful and the indications upon the exposed mucous membranes were indicative of contagion poisoning The treatment was instituted from the inception of the diagnosis The case was seen by several experienced confrères and the plan of management as outlined was followed by them as well as by myself The agreement in diagnosis was emphatic Water was the remedy prescribed in regulated doses to the extent of between two and three liters per day during a period of between eight and ten months In each glassful of water some harmless dose of medicine was incorporated for the purpose of producing the desired mental effect upon the patient The agent used for this purpose consisted for the most part of one or two drops of carbolic acid to six or eight ounces of water, which was altered in color each time the prescription was refilled The dose from the bottle was a teaspoonful to be mixed with the portion of water which was to be taken at definite intervals during the day There was a period of two weeks, during the second month of the treatment of the disease, when the young man was unable to work on account of the unsightly appearance of his face and hands, as well as the general discomfort from which he suffered The symptom which remained the longest was edema of the ankles It has, however, entirely disappeared at this time The symptom of next longest duration was the raised patches, some of which broke down, covering the unexposed surface of the body The negro at this time is free from any discoverable lesion or symptom of syphilitic sequelæ The skin is smooth and the discolorations have practically disappeared The case has frequently been observed by several physicians, and at the last visit to my office he was pronounced cured so far as symptoms could be discovered

During the winter of 1894–5 a woman, Lizzie B , single, 26 years old, fair, a stenographer, presented an ulcerated throat The case was not suspicious and the ulceration was considered benign, simple treatment was begun A few weeks later she complained of vesical hemorrhage Examination revealed erosion of and an ulcer upon the inner surface of the anterior lip of the cervix The case was immediately suspected to be a contagious disease At that time no personal interrogation of her previous conduct took place and for a period of several weeks the case was observed and the diagnosis gradually and emphatically determined to be syphilitic Soon after this determination she was confined to her bed with a fever and during this time secondary eruptions manifested themselves in the form of papules They broadened and extended over the whole body The hair fell out in considerable quantities Her treatment, with the exception of local applications to the cervix, was directed in the same general line as in the preceding case The patient, however, during all this period of treatment, which covered perhaps ten months, regularly added teaspoonful doses of the scented and colored water from the druggist's prescription bottle to the doses of water which were given her at stated intervals, and in sufficient quantity, during each day of the ten months In addition to internal hydriatics, the bowels were irrigated daily during a period of the first three months of treatment Subsequent to that time, irrigation was performed at intervals of once each week The recovery of this woman is satisfactory to herself and no physical symptoms of syphilis can be found

The local treatment consisted principally of hydrozone applied in full strength to the chancres in each case The surface eruptions on the skin were anointed with a liquid soap, which was rubbed in till it was dry and allowed to remain until washed off at the bath on the following day, to be again rubbed in as before

In conclusion, the heralded treatment of syphilis at water cures, such as Hot Springs, Ark , and other places of the same character, are, in my opinion, dependent upon the quantity of water which is used internally and externally, and not upon the quality Furthermore, the relief of the symptoms is dependent upon the large and regularly used internal hydriatics, and not upon the morbid effects produced by the mineral and vegetable materials which are administered in enormous and destructive doses By reason of the preservation of the functions of the vital organs, through the internal use of water and the external baths nature withstands and permits the awful abuse to which it is subjected by the tons of mercury and the barrels of iodid of potassium that are imposed upon credulous patients

103 State Street

A PLEA FOR CONSERVATIVE TREATMENT OF CARBUNCLE

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5-8, 1896

BY W E SHAW, M D

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In these days of neophilism, I feel that an apology is due for presenting so apparently threadbare and homely a subject as the treatment of carbuncle, for there are few subjects upon which the text-books are in such near accord as in the treatment of this disease Nineteen out of twenty articles mention as the chief means of combating this disease, incision, caustics, total excision, curetting and poultices, etc , when the disease is of any severity This paper does not consider the treatment of anthrax

The histories of two cases recently related by a medical friend, with those of three others of which I was informed during the last year, one of which was fatal, all five threatening life, deepened the impression formed several years ago, that the knife or caustics should very rarely, if ever, be used in the early stages of carbuncle These facts, with the experience that I have had recently with a case of severe carbuncle of the lip and cheek in a very feeble subject where the more conservative methods were used, and because the patient recovered without a noticeable scar, made me still more strongly in favor of conservatism After having my attention again called to this subject, I turned to the article on carbuncle in Prince A Morrow's exhaustive work, and there found what I suppose to be the latest statement of the management from the surgical standpoint, from which I quote The author says "there are only three methods which wholly commend themselves to the surgeon of today, treatment by incision, by total excision and parenchymatous injection" After describing the mode of incision and curetting he says "The relief that follows the operation is immediate The patient feels better The temperature may fall to normal"

After describing the method of complete excision of large carbuncular masses, in which we know the hemorrhage is apt to be severe, he says "The relief following the operation is instantaneous and marvelous The temperature sinks at once, the pain ceases absolutely, the patient, who may have been in a state of delirium and sopor, recovers his normal condition in a few hours"

If we go back for a century and examine what has been written on this subject, we find the same fundamental ideas governing the majority of writers, viz, that carbuncle is a malignant thing, out of which can come little or no good tissue This has been the basal thought in treatment The operative technique has been greatly improved by the advances along the line of asepticism

In opposing operative measures as a rule and making it the exception, I am offering nothing new, for there has been for many years past occasionally a surgeon who would have the temerity to depart from the beaten path and advise conservatism

I believe that the wonderful results accomplished in these latter days under aseptic surgery, have had a tendency toward causing surgeons to depend too largely upon the brilliant and spectacular results of the knife, and too little upon the slower and less impressive methods of nature Fame is relished by all, and it may be at times difficult for us to resist the temptation to cut the Gordian knot and thereby gain the plaudits of the crowd, even though worse for the patient I believe that a conservative feeling in regard to the treatment of carbuncle is more widespread than works on surgery would indicate, but the weight of these articles, and the practice of the surgeons who wrote them, throws the majority of the best opinions upon the side of positive methods As most of the severe cases of carbuncle, in cities at least, are seen by surgeons in consultation, the treatment is largely guided by surgical specialists When a surgeon is called in consultation, the very circumstances largely demand that something decisive be done and with such abundance of authority, in the same direction, it is no wonder that the apparently slower method should be placed at a disadvantage I have not made an exhaustive examination of the surgical literature on this subject, but have found only three strictly surgical specialists who decidedly oppose the surgical tendency Ashhurst, after naming these older methods, says "it is not proven that any of these methods are effective either in limiting the extent or duration of the disease" Walsham, 1887, says "that the crucial incision and caustics were formerly favorite practices, but the majority of surgeons now use expectancy" Moullin, 1891, says "that the old free crucial incision is pretty much abandoned, and strongly condemns poultices, which have a tendency to increase the trouble" The article which made me a convert to conservatism was read before the AMERICAN MEDICAL ASSOCIATION in 1885, by the honored president of this Section The cardinal principles Dr Bulkley laid down in this article were 1, careful avoidance of all irritation of the carbuncle by applications or pressure, 2, avoidance of hot or moist applications during the whole course of the disease 3, avoid incisions and caustics, leaving the whole process of opening and discharging to nature, 4, avoid stimulants unless absolutely necessary to sustain life, 5, protect the inflamed surface from first to last with a soft ointment, preferably one containing ergot and oxid of zinc spread thickly upon lint, changing as often as required, 6, administer ¼ grain calcium sulphid every two hours, from first to last, 7, support the patient, not by stimulants and medicine, but by placing him under the best possible hygienic surroundings, 8, remedies Occasional laxative Dover powder if necessary, and a mixture containing mag sulph, ferri sulph and acid sulph in water after each meal

These principles appear perfectly sound, especially in so far as they caution non-interference Some one has aptly said "that the wise man is he who knows when to stop," and it has often occurred to many of us that our profession, which is rushing along under the stimulating impetuosity of the age in laudable efforts to discover something new, is frequently, under the guidance of our noble and enthusiastic advance guard, led to conclusions and carry out practices which are to the detriment instead of the advantage of the patients I am as firmly convinced that the early excision or incision or caustic destruction of every carbuncle is wrong practice, as I am that bleeding to syncope would be wrong in any case of pneumonia I know not how much virtue there is in calcium sulphid in these cases, but many cases of disease, where there is tendency to suppuration, do well under it, and I shall use it until I find a better remedy I do not place great weight upon any special formulæ that Dr Bulkley or I may have used either internally or as a protective ointment I believe they have virtue, but the greater benefit is that of excluding meddlesome interference and giving the great physician, nature, a chance to assert herself

Many times when perplexed, I have turned with profit to a little book, a towering monument to the genius and discernment of John Hilton, "Rest and Pain" Hilton speaks in this book of cases of carbuncle that were not progressing satisfactorily under the care of eminent London surgeons, where a speedy termination was secured by neat adjustment of the parts, a cotton wool compress and so bandaged as to keep the parts at rest I have treated about a dozen cases by this method, but will report only four because of their greater threatened severity in the beginning and the good results following the treatment

Case 1—Mrs J, aged 35, a German housewife of moderately good health, had been suffering with a swelling on the back of her neck for a week when I saw her, Nov 8, 1885 The swelling extended from the angle of one inferior maxilla to the other In the middle the carbuncular mass was 3½ inches in width and there was at least 18 square inches of tissue involved The swelling was very dense, dusky red in color and exceedingly painful Within a diameter of 2 inches there were five or six pustules which had the appearance of beginning sloughs, that would in a few days communicate with each other The temperature was 102 degrees, and the general constitutional disturbance was affecting her strength No albumin or sugar in the urine She was given the treatment advised by Dr Bulkley, and during the next week the swelling remained about the same, but she was more comfortable At this time she was seen by my friend Prof P S Conner, who advised poulticing, which I reluctantly carried out for two days, but as they were troublesome and no seeming benefit was obtained, I abandoned them, and again used the ointment Two days afterward, as there appeared some deep fluctuation, an incision not more than three fourths of an inch wide was made through the dense leathery mass, and about one ounce of pus discharged The original treatment was continued and there was not the slightest slough around the wound nor extending from the pustules, although it was about six weeks before the induration disappeared

Case 2 —Chas W G , aged 40, American, of good personal history, but had suffered several times during the previous six months with ague When I saw him he had been under the charge of another physician for a week The induration extended from ½ inch to right of median line to angle of left inferior maxilla, about five inches, and was 2¾ inches broad at widest point There were between 8 and 9 inches of surface involved There were eight pustules and the appearance was threatening The treatment was about the same as in the former case and he was discharged November 30 He suffered very little during the last weeks, and there was not the slightest sloughing

Case 3 —Chas S , aged 20, a feeble German with incipient phthisis He had worked as glue maker until the previous evening, although he had felt a painful swelling for three or four days, increasing in size and painfulness, on his neck and extending to angle of left jaw The swelling was 4 by 2½ inches in extent There were four well marked pustules about the middle Within a week there were about a dozen pustules, but they dried up, only extending through the thickness of the skin He was able to resume his work at the end of three weeks No sloughing

Case 4 —Jno L , aged 55, a teacher by profession He had suffered greatly with insomnia for several years His nervous organization had been greatly shattered by dissipation, but for the last four years he had lived a temperate and correct life For several weeks preceding this attack he had felt very much debilitated, sleeping very little except when under the influence of anodynes I saw him Sept 14, 1895 He said he had been suffering with a "boil" at edge of nostril for nearly a week For two days he had fever and chilly sensations No appetite, foul breath and badly coated tongue Temperature 100 degrees On examining the lip, which was nearly an inch in thickness and very dense I found there were four pustules nearly communicating The mustache was closely clipped and an ointment of acetanilid, balsam Peru and zinc ointment applied Calcium sulphid, gr ss every two hours (the dose I gave in all four cases), and phosphate of soda given as a laxative This treatment, with trional occasionally as a hypnotic, was continued through the whole course of the disease At the end of a week the induration and swelling had extended, closing the left eye There were ten threatening pustules, two on edge and two on the under side of the lip About one inch in width of the lip seemed to be perfectly honeycombed with bands of necrotic tissue, and hope of saving the lip was almost abandoned After several days the swelling began to subside The gangrenous strings began to separate and were removed, and by the end of the third week the lip was perfectly healed

I have treated quite a number of carbuncles of less severity by this method, and with satisfaction I do not think it can be doubted by any one that these four cases were severe, sufficiently grave in the beginning to give the treatment a severe test, notwithstanding the fact that none of them were diabetics I thought that each one demanded my best efforts, and had I seen them before being converted to the more conservative method, I am sure that they would have fared much worse under the knife or caustics The treatment of any case of carbuncle will vary in the minutiæ according to the patient's individual condition My experience compels me to emphasize a few "don'ts" Don't cut, scrape, burn, poultice, chill with ice, blister or irritate in any way, but gently protect the part with some soft antiseptic ointment, over which apply a soft cotton compress If sloughing supervenes, do not destroy any sound tissue, or cause any hemorrhage in removing the dead tissue, but support the flaps as advised by Hilton Give calcium sulphid, in ½ grain doses, every two hours

Let us have a Department of Public Health!

A FATAL CASE OF MULTIPLE SUBCUTANEOUS GUMMATA

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5-8 1896

BY WILLIAM S GOTTHEIL, M D

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The so-called tertiary lesions are not a necessary consequence of the syphilitic infection They occur according to Finger's statistics, only in 5 to 40 per cent of the cases, and Haslund, Mauriac and Neumann give the still lower figures of 5 to 15 per cent No case of syphilitic infection is, however, safe from the possibility of their occurrence, and the length of time that has elapsed since the commencement of the disease is no guarantee against their appearance Fournier reports a well authenticated case occurring fifty years after the initial lesion, and tertiarism appearing ten or fifteen years after the sclerosis is not uncommon The average and most common time, however, is five years On the other hand, they may appear quite early in malignant syphilis, Mauriac reported a case in which gummata occurred a few months after the infecting chancre, forming what the French call *syphilis maligne précoce*, or lues maligna We are as absolutely ignorant of the reason for these differences, as we are of the causes of tertiarism in general Apparently, it is entirely a matter of chance, and bears no relationship whatsoever to the severity of the original disease It is not proven, as claimed by some, that improper treatment, or the want of treatment, or chronic alcoholism, or the presence of any debilitating disease, has anything to do with the occurrence of the tertiary phenomena

The gumma is the characteristic lesion of tertiary syphilis, and it originates always in the connective tissue It may appear in the skin, the subcutaneous tissue, the periosteum, the bones, the muscles, the mucosæ, or the parenchyma of the internal organs It is most common, however, in the first two situations, and Neumann has shown that, of all the disease products of syphilis, those of the skin and its adnexa are the most permanent and refractory

Anatomically considered, the gumma can not be distinguished from the tubercle and papule that mark the earlier stages of the disease, but clinically they are quite distinct The gumma, like the tubercle, is composed of a dense, small-celled inflammatory infiltration, with a great tendency to peripheral growth Like all similar neoplastic structures, these cells possess little vitality, the central and oldest ones, being furthest removed from the vascular supply, soon die and begin to undergo retrogressive changes, fatty, caseous and calcareous degeneration The cell mass grows at the periphery, causing, by pressure, death of the cells of the tissue invaded, while the central portion softens and degenerates A limit to its growth is, however, finally reached, the peripheral cells become organized into connective tissue and form an envelop for the mass, the central semi-fluid portions are absorbed or voided, the capsule shrinks, and a fibrous nodule with chalky or cheesy contents is left behind

In the skin the gumma appears as a circumscribed brownish-red, hard, elevated nodule It frequently occurs in groups arranged in circinate or oval forms, The mass grows steadily for a time, and may attain the size of a quarter of a dollar It may then be resorbed without liquefaction, or it may slowly soften and break down A scaly crust forms over its center, on the removal of which a yellow or sanious glutinous fluid oozes out, and a deep irregular ulceration is revealed, covered with honey-like secretion and detritus If the necrosis is slow, the softened matter under the epidermis raises it into a pemphigus-like bleb, if the secretion dries rapidly as the ulceration spreads, ecthyma or rupia, or an ulcerative serpiginous tissue destruction is set up

The subcutaneous gumma begins in the cutis or subcutis as a small lentil-sized mass with intact and movable skin over it The integument is not primarily affected It slowly grows to the size of a walnut, and gradually invades the skin, binding it to the connective tissue below The pale skin becomes pink, then red, and finally livid As the center of the gumma softens, fluctuation appears, and the infiltration closely resembles an abscess Years ago I made the mistake of opening a large gluteal gumma under that supposition But even when unopened, pressure and invasion finally cause necrosis of the skin It breaks and the contents of the mass, a small quantity of bloody, sticky, honey-like fluid is expelled The skin around the opening breaks down, and we have finally a round gummatous ulcer, with an undermined lardaceous border and a hard necrotic base

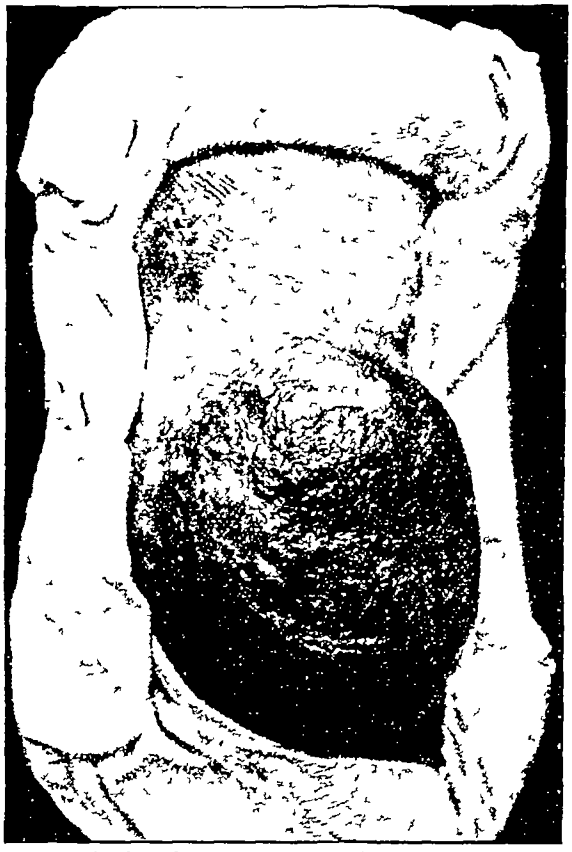


FIG 1—Multiple subcutaneous gummata posterior surface right ankle Cast from life

The shape of the subcutaneous gumma is round or oval, depending on the anatomic structure of the part On the fingers and toes it is elongated, in the general subcutaneous connective tissue, round as a ball Its size is usually small, though Fournier records one that measured 14 by 10 centimeters, and Mandeville, one that reached from the orbit to the neck, and from the nose to the occiput, covering the lower half of the face and the upper half of the neck, and 5 centimeters in height In the case that I am about to report, one gumma at least was 7 inches in diameter The localization is usually symmetrical The head, neck, shoulders and limbs are most frequently the site of the growths, but they may occur anywhere

The number of gummata present at one time is usually not greater than one to six, Joseph says one to three The more numerous they are, the smaller their size Mauriac says that more than a dozen is very exceptional, and Cazenave's case with 50, Kaposi's with 50 to 100, and Lisfranc s with 160 gummata are rare and isolated cases In my case there were over 50 tumors

Subcutaneous gummata are rarely attended by any marked constitutional symptoms Mauriac reports one of the anterior border of the masseter that prevented the patient from swallowing, and, by compressing Steno's duct led to the formation of a salivary fistula, and Ricord notes crural and cubital neuralgias from gummatous pressure Usually, they cause no general symptoms at all, and the patients apply to us to be relieved from a disgusting and annoying sore I have not been able, in the literature that is at my disposal, to find a case where death occurred from cutaneous gummata without the presence of any other complicating disease, and in this respect, as well as in regard to the size and number of the tumors, the case recorded below, while not unique, seems worthy of attention

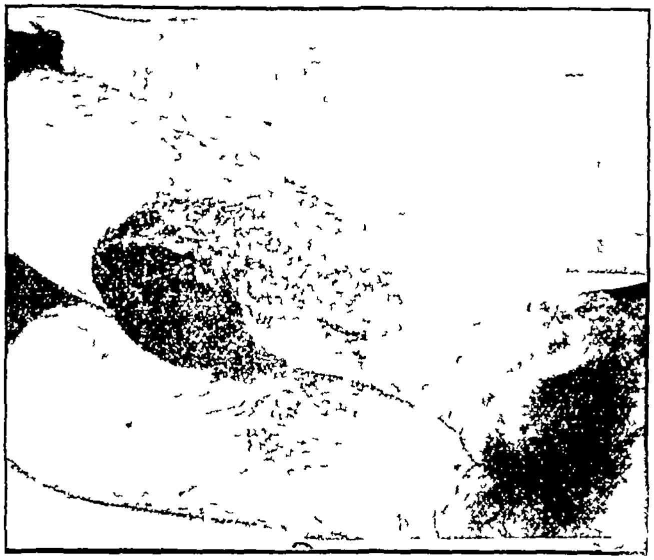


FIG 2—Multiple subcutaneous gummata Photographed on a [illegible]sion

Charles L , aged 22, admitted to Lebanon Hos[illegible] Feb 6, 1895 The family history, so far as [illegible] be obtained, was entirely negative No pers[illegible]tory of syphilis or tuberculosis could be o[illegible]

The patient came to be treated for [illegible] tumors on the legs and the forearms [illegible] first made their appearance six or eig[illegible] They grew very rapidly especially [illegible]

Nothing abnormal was found in [illegible] but the external surface of the b[illegible]ing picture From the instep [illegible] the wrists to the elbows, the [illegible] covered with a succession of [illegible] were more or less similar [illegible] form or [illegible]-shaped. [illegible] The smaller ones were [illegible] largest were as large as [illegible] able, not painful and only the largest were tender to pressure The smallest were firm to the touch, and the skin over them was movable and but slightly reddened The medium-sized ones, which projected about half an inch above the surface, were softer, the skin over them was more or less pinkish or glazed, and adherent to the surface of the tumor Over the large ones the skin was of a livid dark-red hue, and over the largest it was ulcerated and bathed with a thin secretion, the surface covered with very pale granulations, and discharging a sanious sticky fluid

In all, there were over fifty tumors, varying from 1 to 6 inches in diameter The largest were situated above each ankle, three on one side and two on the other in corresponding situations and each leg had in addition ten to twelve smaller ones On each forearm were twelve or thirteen, mostly smaller than those on the legs

The patient's general conditon is bad, he was anemic and emaciated He had some fever, but there were no symptoms of disease about any of the internal organs He was put on a vigorous anti-luetic treatment, and this was persisted in with but few intermissions until August 2, the date of his death It consisted chiefly of mercurial inunctions, the use of the iodids in as large doses as could be borne and the dressing of the opened gummata with antiseptics On March 19 he was taking 150 drops of the saturated solution of iodid of potassium, three times daily While no new gummata appeared the smaller ones continued to increase in size and the larger to break down The following extracts from the bedside record will show the steadily downward progress of the patient

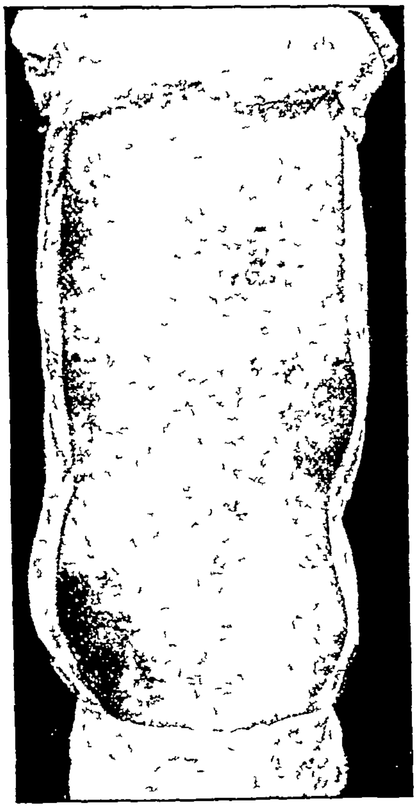


FIG 3—Multiple subcutaneous gummata right forearm Cast from life

March 28 Takes 150 drops of the saturated solution of the iodid of potassium three times daily, one mercurial inunction daily the bichlorid 1-5000 dressing is changed to iodoform Evening temperature 103

March 30 Two more gummata on the right ankle and one on the left ankle are beginning to break down

April 2 Is taking 210 drops t i d The ulcerated gumma bleed freely when the dressings are changed They extend almost entirely around the ankle Two more large and several smaller ones are commencing to break down The discharge is profuse and foul and it soaks through the dressings though they are changed several times daily

May 29 The patient's strength is diminishing fast, in spite of tonics, extra diet, wine, etc He has lost his appetite and sleeps badly, is inclined to be somnolent during the day The ulcerations seem more painful and it is impossible for the nurse to keep them clean Maggots have appeared in the largest one and the stench is almost unbearable The bichlorid dressing was returned to, but without effect, then as strong solutions of permanganate of potash, creolin and other antiseptics as were safe, were employed These measures had little effect on either the fœtor or the larvæ The largest of the ulcerated masses now measures about eight inches across At this period the casts and photographs were taken

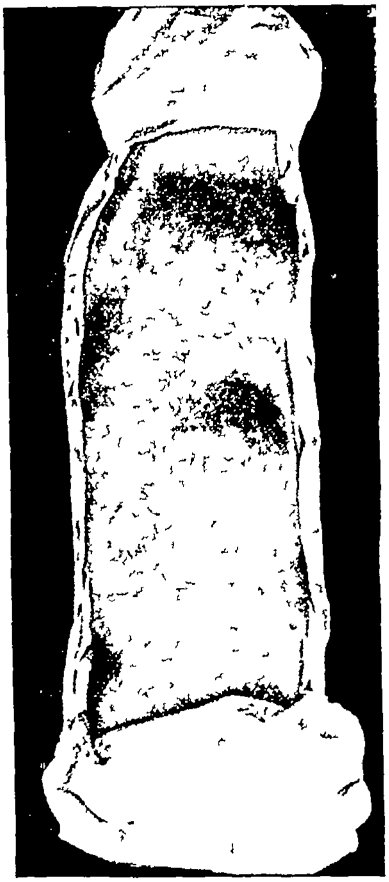


FIG 4—Multiple subcutaneous gummata, left forearm Cast from life

June 8 Patient developed a diarrhea and the iodid of potassium, of which he was now taking 720 grains daily by mouth and rectum, was discontinued He was given the iodid of sodium, 45 grains daily, afterwards increased to 180 grains daily The diarrhea was treated with lead and opium pills, starch and laudanum injections and the nitrate of silver

June 19 Patient's diarrhea is better

June 24 Patient's general condition is so bad that all medication, save strychnin and tonics, is discontinued The only food that can be administered is milk punches, of which he takes six daily The evening temperature is 102 degrees He lies in bed all day, apathetic and somnolent

July 10 Diarrhea has returned and is refractory

July 27 Diarrhea still continues Temperature subnormal, 96 degrees P M

August 2 Death

Here, then, is the record of a case of syphilis of the old-fashioned variety, a kind that, luckily, we see very little of today It is the true *lues maligna*, the syphilis that in the middle ages devastated Europe and that in more modern times has ravaged the Sandwich Islands and Africa Such cases as these were common in the past, and they are responsible for the very grave prognosis of the disease which the sixteenth and seventeenth century doctors gave, and the lay opinion of its incurability today We rarely see such cases now, and have come to regard lues as a fairly mild and tractable disease But occasionally it flares up with its old-time ferocity and we understand how it has been the scourge of nations

The case that I have recorded is remarkable in the following respects 1, in that there were no traces in the patient of past syphilis, I lay no stress on the history, knowing that willful and unwitting errors render it worse than useless, 2, in the number and size of the gummata, the case takes its place with those of Cazenave, Kaposi and Fournier as the half dozen most extensive cases of subcutaneous gummata on record, 3, in that death occurred from the gummata alone, from exhaustion and septic infection, without any complicating disease of the internal organs

37 West 50th Street, New York City,

SYPHILIS AND MARRIAGE

Read in the Section on Dermatology and Syphilography, at the Forty seventh Annual Meeting of the American Medical Association, at Atlanta Ga May 5 8 1896

BY W F BREAKEY, M D

ANN ARBOR, MICH

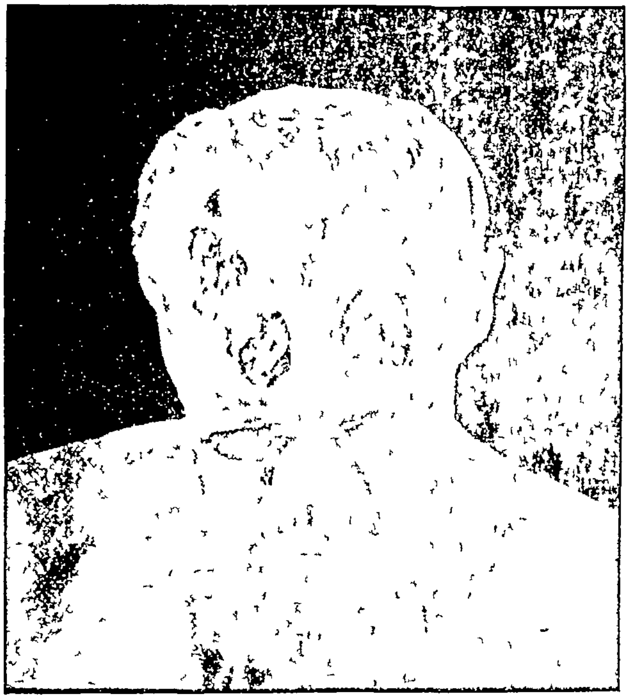
As a brief contribution to the assigned topic, "Syphilis and Marriage," I offer the following summarized history of a case with accompanying photograph, which, as the attorneys say, is put in evidence The hard facts do not seem to need comment and are sufficiently "practical" to meet the request of the Chairman of the Section

Mr ——, age 63, married at 30, father of thirteen children, seven of whom are living, aged respectively 27, 23, 20, 18, 15, 12 and 10 All of these are afflicted with what the mother calls "catarrh" Of the six dead, the first died in a few hours, the next "had trouble with the spine" and died at 17, the next "had water on the brain" and died at 1 year and 9 months The two others, I think, were stillborn or died in infancy

The wife also speaks of her husband's disease as "catarrh" She states that "he had headache and some small painful lumps on his head when married, thirty-three years ago, but that the lumps did not become large till about twelve years ago He fell out of bed in a fit about fifteen years ago and hurt his head The lumps were cut open by a doctor about seven years ago at which time they were solid" The large depressions shown in the photograph, are ulcers in the seat of the former "lumps" that were cut open, with abundant purulent discharge and dreadfully offensive odor, the outer plate of the skull is completely denuded of soft tissue, roughened on surface, in two or three large pieces, loose and movable, with ragged edges In addition to ulcers and necrosis shown, there is ulceration of nasal fossæ with necrosis of vomer and nasal bones, and he is also so nearly blind with syphilitic iritis that he has to be guided about

He suffers with severe pain in the head and some mental depression The patient gave in substance the following history That over forty years ago, about eight or ten years before he was married, a single youthful indiscretion, and the only chance for infection that he knew of, was followed some weeks after by a single small sore on his genitals, which a doctor in New York cauterized with "nitre of silver" The sore soon healed He never had a rash that he knew of and had no internal or other treatment

Beside the bearing of this case upon the questions pertaining to syphilis and marriage—which are so obvious, particularly in the history of the offspring, as not to need elaboration—are some points germain to this question and relevant to the pathology and treatment of syphilis, that seem important to mention here 1 The wife, and mother of the thirteen children, appeared to be in good health and gave no history of syphilis or treatment for that or other illness Did she have syphilis by conception and become immune? 2 What would now be thought of the error of cauterizing the primary lesion and the neglect of systemic treatment, and the assumption that after healing the patient was free from constitutional disease? 3 The cutting of the gumma It is impossible in the light of modern experience to resist the belief that had this patient been sufficiently intelligent or properly advised and treated from the first he might have been cured or saved the commission of the great moral error in marrying under such conditions



Ulcerative syphilis contracted 40 years before, primary lesion cauterized, no immediate constitutional symptoms observed no constitutional treatment gummata on scalp incised when solid ulcers in seat of gummata on the plates of skull necrosed rough ragged edges of loose bone, very offensive odor necroses and ulceration in nasal fossæ nearly blind with iritis

The history of the case may serve as text or sermon

The consideration of "Syphilis and Marriage" in their relations to one another is one of greatest importance to the welfare of the human race, and none are so well qualified to discuss it as physicians None know its prevalence so well as they, nor the delicacy or difficulty of arousing public attention Professional obligations prevent the use of a "modern instance "

We have legislative enactments enforced by public opinion to protect against smallpox and scarlet fever, and many other less actively contagious diseases, and sanitarians seek to have included in the class of "diseases dangerous to public health" such moderately communicable diseases as typhoid fever and consumption The state also enforces enactments to prevent or restrict infectious diseases even among brute animals These diseases, however, usually occur in epidemic waves or in periodic seasons, but syphilis, which outnumbers most if not all of them, like death, "has all seasons for its own "

Yet there is neither enlightened public sentiment nor legislation of any kind to protect against its ravages There is no sanitary placard nor even a general knowledge that discriminates

The tendency in the popular mind to classify all unsightly diseases of the skin as communicable, subjects to moral suspicion the innocent victims of acne, eczema or psoriasis, while less conspicuous but genuine case of syphilis go unrecognized and unchallenged And this popular misconception of the laity is too often strengthened, if not founded on thoughtless or erroneous professional opinion Prudish notions or false modesty forbid inquiry Breeders of domestic animals intended for food or beasts of burden are careful to select the best progenitors But men who could not pass the physical examination for entrance to the army or navy, or even a good life insurance company, are accepted or engaged to marry, and enter without question into the most solemn obligations a human being can take upon himself, perhaps infecting an innocent healthy wife, and procreating children fore-doomed to feeble, wretched existence, if not to premature death A further medico-legal question might be raised "Is syphilis a valid cause for divorce?" And the answer must be determined largely on medical evidence as to the conditions in a given case It is easy to conceive a case where such cause would be sufficient

The long list of transmitted and inherited diseases is a frightful comment on our civilization The halt, the lame and the blind the feeble, the hydrocephalic, the paralytic, the imbecile and the idiotic go far to fill our almshouses and asylums In this list syphilis is a frequent factor

Whatever has been done to mitigate the evil or lighten the shades of this not overdrawn picture has been done chiefly by medical science, and evidently further progress in solving the problems must be made largely by physicians, and from a strictly medical point of view, without bias or other considerations than those of individual and public health Though here is a case in which the political economist, the philanthropist and the missionary might find ample material for the study of disease, of poverty vice and crime, and opportunity to coöperate with medical science in the endeavor to remove a prolific cause

If the question be, "ought syphilitics to marry while uncured?" every consideration, medical, moral, social and sanitary, oppose by an emphatic no

If the question be, "is syphilis an insuperable obstacle to marriage?" the answer involves the larger question of the curability of syphilis If we believe syphilis curable—as I think the most of us do under favorable conditions, and when the physician can control the treatment from the first and continue it long enough—then we should have the courage of our opinions and act and advise accordingly, and we should urge the compliance with necessary requirements If the question be as to the proper course to be advised to those who acquire syphilis, or in whom it develops after marriage, particularly the mother, or if syphilitic children are born, well established principles of treatment determine methods of procedure

It may be a practical view—for the race it is a fortunate view to take—that from illicit intercourse of syphilitics few children are born, and very few of them are born alive Even of syphilitic children born in wedlock, few, as we know of the small proportion alive at birth, survive the fifth year

Yet the popular conception of the doctrine of Malthus is abhorrent to the finer sensibilities of humanity Nature is lavish in all her procreative material and facilities for reproduction of species One plant contains germs enough to seed an acre Thousands of spermatozoa are secreted for one that fertilizes It would be fortunate if we could be sure that only "the fittest survive " Weeds grow without cultivation where the choicest flowers with tenderest care wither and die It seems often true that in selected and over-cultivated species the quality deteriorates, and we go down to the lower strata for hardier stock with roots deep in the mother earth, with which to cross or graft more vigorous, even though more vulgar life The popular conception in the minds of the laity of the malignancy and incurability of syphilis, a misconception exaggerated by quacks and their advertisements, and too much supported by medical opinion, and too much taken for granted in the average prognosis and inefficient treatment, tends to a condition of doubt and discouragement, the practical effect of which is to leave many unfortunates to hopeless misery and despair

It must become the province of medicine as it is the aim, to cure, not only simple and self-limiting disease, but all the ills the human body is subject to One of the theories of the Christian religion rests on the possibility of recovery, under essential conditions, from moral disease The Divine Healer and his disciples were of lowly origin "The stone which the builders rejected became the head of the corner "

Time is a great corrector of ills, acquired or hereditary Many of the subjects of syphilis are literal victims and have been as much or more "sinned against than sinning," and are as truly desirous of cure, in the largest sense of the word, as are the most penitent sinners who plead for moral and spiritual aids to reform

Who shall say that a victim of syphilis, promptly and properly and sufficiently treated, can not recover and shall not be permitted by medical sanction to marry? Is there more danger that he will infect a wife or beget unhealthy children than if he had gonorrhea or tuberculosis

The scope of this contribution to the discussion of a designated topic is limited by the supposition that other phases of the subject will be covered by other contributors, and also by the impracticability of more than touching upon a few salient points that seem prominent in so vast a field, a field viewed from so many and varied standpoints by different observers and through different media I have not considered the relative dangers to either parents or child, or the degrees of heredity, paternal, maternal or mixed, or the treatment appropriate to these varying conditions It seems to me, then, if asked by a syphilitic man or woman, "can I safely marry without endangering my wife or husband or expected children?" we should be prepared to summarize the conditions under which marrige might be tolerated, if not justified, and the conditions under which it ought to be allowed

In deciding these conditions we should remember, as Fournier says, that while syphilis is ordinarily contracted in youth and single life, its most grave and disastrous complications occur usually in mature life, in the late secondary or tertiary stage, a period almost indefinite in duration For which reason the period of treatment, of observation and probation should be amply long, in general terms we may say from two to four years

The period since infection, the character and extent of lesions, the involvement of particular organs, the occurrence of ulceration, gummata or nervous lesions, length of time, thoroughness and persistence of treatment, the absence or disappearance of adenopathy, may materially influence the time through which treatment should be continued in a given case Further, to make whatever course may be accepted as the concensus of medical opinion of value to the human race in social, moral and sanitary life, it should be brought within the reach of those who do not consult physicians and therefore will not be benefited by it except it be carried to them Can not public sanitation be enlisted to aid in spreading a more correct information on this subject This seems important not only in the interest of the vast number of cases of venereal syphilis, but also in the interest of the very considerable number of cases of syphilis of the innocent

The average popular professional skepticism as to the incurrence of syphilis only through venereal infection, is inconsistent with the extreme care taught and practiced in modern antiseptic medicine and surgery, to avoid chances of infection less probable and less dangerous It is very probable that in the near future the syphilitic bacillus will be demonstrated beyond a doubt

In the light of modern prophylactic science it does not require much of a stretch of prophecy to expect that we shall soon have some enthusiast offer a method of immunity against syphilis by artificial diluted inoculation or vaccination Meanwhile, no doubt, conservative physicians will still rely on methods of cure

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THE MEDICO-LEGAL ASPECT OF EYE AND EAR CASES

Read before the State Medical Society of Pennsylvania May 24 1896

BY J WALTER PARK, M D
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The subject chosen for my paper is one of special interest to me, and I feel assured it will be to the general practitioner, if I succeed in impressing upon your minds the necessity of a certain professional relationship which should exist between the general practicing physician and the specialist in the examining and treatment of accidental eye and ear injuries, preparatory to what may become medico-legal cases My subject is such an extensive one, that I will confine my remarks more particularly to accidental injuries I wish to call your attention to the following points of interest 1, the kind of an examination, and record of the case, that should be made by the physician in attendance at the time of the injury, 2, the kind of cases which should be examined by a specialist, or one skilled in the treatment of diseases and injuries of the eye and ear, 3, some of the requirements that are a necessity to the general physician and specialist in medico-legal cases, and their advantages to the plaintiff and defendant in suits for damages

1 To illustrate the first division of my subject, I will cite a case which answers most every point I wish to impress upon you as regards the kind of an examination, record, etc, that should be made in such cases In October 1892, I was sent by a railroad company to examine the eyes of Mrs S, who one year and three months previously had been in a wreck on their road, and claimed that her present defective vision was due to injuries received at that time, and as a result brought suit against the company for damages A careful examination of the fundus of each eye revealed dense opacities in the vitreous humors of both, and on account of their density no good view of either fundus could be obtained, yet to me it evidently was a case of disseminated choroiditis, which is generally the cause of these opacities and diminution of vision Hemorrhages into the vitreous may also cause similar results, this the defense claimed was the cause, and was due to the blow she received as the car turned over The attending physician had not made an ophthalmoscopic examination of either eye at the time of the accident, hence could not say what the interior of the eye looked like, whether any hemorrhages were present or not, but the patient claimed that from that time on her vision was impaired, and the jury awarded her damages accordingly Had a careful ophthalmoscopic examination been made at the time of the accident, and a full record of the case been kept, either by the physician in attendance, or by a specialist, the opacities in the vitreous, I think, would have no doubt been discovered at that time already, and the verdict would have been the reverse This case shows conclusively that in all accidental cases involving the eye or its appendanges, a careful history of the patient should be taken, a minute examination of all the injured parts should be made, notes of a careful ophthalmoscopic examination should be kept, and if the attending physician is not competent to do this, the patient should be sent to one who is competent, or a skilled man sent for to see the patient at his own home, and it should be done immediately

2 I think that all accidents involving the eyeball, cornea, lens, iris, fractures of the orbit, or where the vision of your patient may be impaired in any manner whatsoever, from intra as well as extra ocular injuries or diseases, and in all cases where there are hemorrhages from the ears, signs of fracture of the skull involving the ear, where a careful examination for any previous existing deafness should be made, and a minute record kept, in all these cases the physician in charge should have in c [illegible] specialist,

unless he is capable of doing it himself in a skillful manner As previously mentioned, the consultant should be called in immediately after the occurrence of the accident, this would be for the benefit of the patient, as well as for any future legal complication that might arise Take nothing for granted, be sure you are doing all you can for your patient's welfare, as well as all parties concerned A large sum of money may be due your patient for injuries sustained in an accident, or a like amount may be unjustly demanded of a corporation, especially when the cause of the alleged injuries existed prior to the accident This can only be determined intelligently by a careful examination at the time of the occurrence of the alleged injuries I was also asked to examine the hearing of a patient who had been in a railroad wreck, and had entered suit for damages against the company in which I am confident her deafness was due to a chronic catarrhal otitis media which has existed for years previously, yet this patient received several thousand dollars to settle the case without ever going into court Was this justice to all parties concerned? Had this case been examined carefully at the time of the accident, and an accurate record kept of the case, it no doubt would have been tried by a jury, and the verdict would have been in favor of the defendant At least both plaintiff and defendant would feel as though justice had been done, if a skillful examination of the patient had been made, regardless of what the verdict of a jury might have been A third case of a severe neuralgia of the superior maxillary nerve, which at times involved the ophthalmic branch distributed to the eye, was sent to me by a prominent attorney, who claimed damages against a borough for alleged negligence on their part in not keeping the street crossings clear of snow

His client had slipped and fallen, crushing in the malar bone, and thus injuring the nerve and causing a chronic neuritis of the superior maxillary nerve, with some pain in the ophthalmic branch, which occasionally caused him some pain in his eye, but had not in the least affected his vision This accident occurred over a year previous to the plaintiff bringing suit for damages, and at the time the case was sent to me, almost two years after the accident, the claimant had perfect vision with his error of refraction corrected with lenses, very seldom any pain in his eye, and I could not discover any trace of impairment of vision in any manner whatsoever This man wanted me if possible, to discover something wrong with his eye, so he could demand a larger sum of money when he instituted his suit for damages No careful examination was made at the time of the accident, no records kept and as a result no definite testimony could be procured either for the plaintiff or defendant Cases are rare indeed, where accurate and full records are kept, and yet we are constantly seeing them Let us try at least to show professional skill in these cases, that we may appear as experts and not mere figureheads when summoned before a court of justice

3 The requirements of the physician and specialist in a court of law in eye and ear cases, from a medical standpoint, are so numerous and complicated that I can but refer to a few of the more important ones First of all, you should thoroughly understand the anatomy and physiology of the eye and ear, so that you can intelligently answer all questions relative to injuries of these parts You should be familiar with the use of the ophthalmoscope, be able to use it, and differentiate a diseased eye ground from a normal one It is well to know the general appearance of interstitial keratitis and that it is only syphilis, be it hereditary or acquired, that will produce that characteristic condition of the cornea, which when once seen is never forgotten You should know how to treat them properly, and perhaps save your patient from becoming blind, and yourself from being sued for malpractice

Gentlemen, it is necessary you should know something about such cases, or else send them to some one who does, and then you assume no responsibility Be careful to always state the probable results be they good or bad Make no promises of good recoveries, or as to length of time of treatment required, for if you do and your promises are not realized, but on the contrary your patient gets blind or deaf, and if you are unfortunately worth considerable money, you may soon lose it by paying damages and attorney's fees In ear cases you should be able to detect a simulating case of deafness from a genuine one, the appearance of a recent ruptured tympanic membrane from a perforation produced by a suppurating ear Suppose a pupil comes from school complaining of pain in one of his ears, and tells his parents his teacher hit him on his ear with the flat of his hand, the parent takes him to his family physician to have his ear examined He finds a ruptured drum membrane, the case is taken into court, and under cross examination, you as the attending physician are asked "Doctor, how do you know that the rupture of the drum membrane of this child's ear, is not an old perforation produced by a suppurating ear?" If you have ever seen cases of that kind, and remember their appearances, you will know how to answer intelligently Traumatic perforations have traces of blood, fresh or dried, around the edges of the wound, and in using Valsalva's method of inflating the ear, the air passes out easily into the auditory canal, while in pathologic perforations it makes its exit only under greater pressure, and produces a whistling sound, also, that in rupture of the drum membrane from compressed air in the auditory canal, the rupture usually occurs at the periphery of the membrane, while in rupture from fractures of the bony parts, produced by kicks, blows, etc upon the ear, it occurs in any part of the drum membrane This is accounted for as follows, and is important in a medico-legal point of view The drum membrane is generally somewhat contracted toward its center by the oto-muscular apparatus, and often favored by chronic hyperplastic forms of catarrh, atrophy and cicatrices near the periphery of the drum head, making this its weakest point where the rupture most always occurs The examination of the ear should be very thorough following recent accidental injuries You should always use reflected light and an ear speculum in examining it, so that when asked upon the witness stand as to what kind of an examination you made, you can at least give an intelligent reply An employe may claim damages for loss of hearing, claiming it to be from a blow on the ear, when upon examination it is found to be due to impacted cerumen I was asked to examine a case in which a large amount of money was demanded for loss of hearing, but after I removed a lot of impacted cerumen and two dead bedbugs from his ear, his hearing distance was normal and he never said a word about damages after that The same precautionary measures, qualifications, examinations, records of cases, etc apply equally as well to diseases of the eye and ear, as they do to accidental injuries, which may come under our care in general practice or as specialists, and we should never undertake a case without consultation, unless we fully understand the nature of the disease we are about to treat, or having previously seen similar cases treated or operated upon by someone skilled in his profession, for by so doing we avoid suits for malpractice and share the responsibility This duty we owe to ourselves as well as to our patients An intelligent community demands this of us, and if we heed not the warning we must suffer the consequences When on the witness stand, answer only such questions as you are obliged to answer, and do it in plain language and in as few words as possible If you can better illustrate what you mean by models, etc , to a jury, do so A juryman once said to me "In medical cases we want the witness to use plain language and well illustrated if possible " In conclusion, allow me to summarize the following points of interest from the foregoing remarks

1 In all accidental injuries, operative cases as well as in general diseases of the eye and ear, make a thorough examination of the parts involved Keep a record describing in detail all the parts injured and your opinion as to any previous pathologic conditions that are present now and may have existed prior to the present injuries sustained, and the relation they bear to each other as regards the impairment of vision or hearing for the present or future

2 If you are not capable of using skillfully the ophthalmoscope or the ear speculum with reflected light, have a consultation with someone who is expert in their use, and do it immediately after you are first called to see the case

3 It is necessary to be well versed in the anatomy and physiology of the eye and ear Study it in health and disease, so you are able to distinguish between normal and pathologic conditions, and especially try to have plenty of experience with cases, for if you lack in this particular you had better not approach a witness stand

4 Consider well the interests of the plaintiff as well as the defendant State nothing but facts, and in as few words as possible

5 Always get the consent of the proper authorities before performing any operations, and never promise your patient any definite results, or how soon they will or will not recover from any injury or operation I am speaking from experience, which after all is the best teacher

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EXPERIENCE OF AN AMERICAN PHYSICIAN IN MEXICO

OPERATING FOR SUPPURATIVE LYMPHANGITIS UNDER DIFFICULTY —TAKING HIS OWN MEDICINE — STRYCHNIA POISONING

BY D H GALLOWAY, M D
CHICAGO, ILL

A peon came into my office and said that a man was "very sick in his leg " He also said that the man "belonged " to the railroad, so I sent him for a hospital permit while I went to the house I found a man, 23 years old, lying on the floor in the front part of a little store There was a space of three or four feet between the front wall and the little counter, and in this space the man lay upon a piece of straw matting, spread on the earth floor The sick leg was uncovered and I proceeded to examine it This was no easy task, as it was so dirty I could see nothing and so tender that he would not let me touch it with my fingers On comparison I could not see any difference between the two legs, so I gave him a placebo and ordered a bath In the evening they brought the message that he was very sick and was keeping the whole neighborhood awake with his cries I went with the messenger and found things no better than reported The bath they had not given him, because no Mexican is willing to take a bath when he is sick, and also because the poor fellow's leg was too painful to admit of such rough handling as would be necessary to get it clean This time I found a small abscess over the edge of the tibia and concluded that there were more of them farther up the leg I told the family that I would come back in the morning, put the patient to sleep with chloroform and operate on his leg They seemed satisfied with this I gave the patient a dose of morphin to ease the pain and allow him to sleep and then went home Before leaving I told them to have ready for use five gallons of boiling water

In the morning I got instruments and dressings ready before leaving home Dr Doty, a dentist, accompanied me to give the anesthetic, and a boy 14 years old, to assist me

A description of the room in which we were to operate will be necessary to an understanding of what followed This room was about eight feet wide, eleven or twelve long and ten feet high There was a door in the middle of the front wall opening directly on to the street This door was two or two and one-half feet wide, and so low that I had to stoop in entering to prevent my hat striking the top, and I am considerably less than six feet tall At the back of the room there was a similar door opening into the other part of the house No light came into the room except by the front door At the back of the room there were some shelves against the wall, then a space of about two feet, then a counter, eighteen inches wide and extending from the wall at one end to within eighteen inches or two feet of the wall at the other end This left a space of about four feet between the counter and the front door

We put the patient on the counter and Dr Doty, standing in the space between the end of the counter and the wall, anesthetized him I took my stand behind the counter, facing the light, and the boy in front of it They had prepared an abundance of hot water, in two earthenware vessels One of these was kept boiling over a charcoal fire and the other on the counter at the patient's feet, for my convenience A girl attended to keeping the fire going and changing the vessels as one became cold or empty I filled a fountain syringe with hot water and suspended it from a rafter in the ceiling As soon as the patient was asleep, I took a stiff brush in one hand, a cake of laundry soap in the other, let the water run from the irrigator and began to vigorously scrub the leg I had hardly begun when the mother behind me set up a cry and shouted that we were killing her boy In a moment the half dozen spectators increased to half a hundred They crowded into the room and filled up the door, but could not get behind the counter This shut off the light so completely as to stop all work I requested them to go out, but they did not move I had a stout cane with me, and with that I reached over the counter and drove most of them out of the shop They still filled up the door so that I could not see to work I filled a cup with hot water and made a pretense of throwing it on the feet of those standing in the door, but they only looked stolidly at me This was too much for my temper, and filling the cup again with hot water I threw the contents at the door, striking those who were blocking up the opening on the arms and chest The water was nearly boiling and was effectual in opening a passage for the light I threw more water as far as I could through the door, and the crowd fell back until it left a vacant space where the water showed on the dry ground This space I kept clear during the entire operation by the same means Every now and then a new comer would elbow his way through, cross the open space and appear in the door, but before his eyes could become accustomed to the dim light within, about half a pint of hot water would strike him amidship and he would disappear with much more celerity than he had appeared Every few minutes this would be repeated, no one outside seeming to think it his business to warn the unsuspecting victim, though there was no mirth, not so much as a smile did I see on the face of any one Even we three reserved our smiles for a later time

As soon as we had succeeded in clearing a way for the light, the scrubbing was resumed, and when that was finished we found a row of bright-red spots extending from just above the ankle, up along the tibia Passing the knee, it crossed more to the inside of the thigh and stopped below Poupart's ligament The largest of these spots was three inches or more in diameter, and they nearly coalesced into a broad red band There was little or no swelling With a scalpel I made a small opening in the one highest up the leg Pus gushed out, I put my knife in again and enlarged the opening to two inches Instantly there was another cry and a fellow, whom I had not seen before, "lit" on my back from behind I struck at him with my scalpel and, in his haste to get out of the way, he tripped and fell to the ground on his back I stood over him and, in the most forcible Spanish at my command, threatened to cut out his heart, liver, and various other thoracic and abdominal organs, if he so much as raised a finger at me again After this interruption, I resumed the operation, only stopping occasionally to douse some fresh victim with hot water The abscesses all seemed to communicate, so I made an incision two or three inches long, broke up all the little pockets with my fingers, then left about an inch and made another incision, and so on the whole length of the leg

During all this time the crowd outside was making remarks, none of them complimentary and some of them threats "He is dead! he is dead! the English butchers have killed him!" "Kill the butchers!" and many other remarks not conducive to our ease or comfort When the man attacked me, Dr Doty advised that we abandon the operation until we could come with a guard of soldiers But I did not see exactly how we were to get away The people already thought the man was dead, and would be sure of it if we by any means tried to leave while he was in that condition

Several times as we neared the completion of the operation an old man came in, felt of the patient's pulse, looked at his eyes, then went out again and announced to the crowd that the man was not yet dead, but he soon would be The investigator was a different man each time and always an old one, seeming to think he was less likely to get scalded By the time I was done operating, the street was full of people, probably two or three hundred of them, they were noisy and restless, and we were pretty well alarmed for our own safety We discussed the situation and decided that we could not leave until the patient had entirely recovered from the anesthetic Not wanting them to think that we were afraid to go, I proposed to occupy the entire time necessary for his recovery in putting on the dressings The Doctor stopped the chloroform as soon as I was done cleaning out the abscess cavities, I packed them all with iodoform gauze, wrapped the leg in sterilized gauze, put on absorbent cotton and then, beginning at the toes, covered the whole leg with a broad bandage This I wound on with more care than is taken in doing a laparotomy, winding a few turns at a time, unwinding and rewinding, until the patient had recovered sufficiently to talk Then we laid him down in his place on the floor and allowed his friends to come in one or two at a time and talk to him When they found that he was alive and his pain all gone, a reaction set in, the crowd became quiet and we prepared to go First I called in his mother and gave directions for his care, and asked that some one be sent to my office in the evening to inform me of the patient's condition Then we gathered up our things and walked through the crowd as unconcernedly as possible They separated without a word and allowed us to go through That evening a messenger came to say that the patient was doing finely and wanted his supper, which was proof to them that he would get well I directed the messenger to come again in the morning, and when he brought the same message, I ventured to go I called every day, and each day for a week had difficulty in entering the house, so many stopped me to apologize for their rudeness on the day of the operation I took out the packing and thereafter irrigated and repacked every day until it was healed At the end of a week the wounds were rapidly closing up About this time the man who jumped on my back the day of the operation, watched the dressing and then told me that he once had one small abscess on his leg, that the doctor made a very small opening in it and it required six weeks to heal, in this case the openings had been made very large, but were nearly healed in six days He said he was a brother of the patient and thought I was cutting more than necessary and that was why he attacked me, but he was sorry for it now

The point where the infection gained entrance, I failed to find, but as they seldom bathe their feet they often have abscesses under or about the nails and very frequently the heels are fissured In this case the infection probably entered some small injury to the toe, the original wound healing before any trouble was experienced The greatest unkindness you can do a Peon is to give him a pair of American shoes The probabilities are that he will put them on and wear them day and night, without removal, till they are worn out They are in the habit of wearing only sandals, but I have had men come to me wearing American shoes and complaining of sore feet On removing a shoe, I have found the entire foot macerated like a wash woman's fingers and an odor that is best left unimagined In such cases I would direct soaking in hot soap and water for half an hour at a time three times a day This treatment and a return to sandals was effective

It will hardly do to call a country uncivilized because a surgeon is molested in the discharge of his duties The same things, or worse have happened here in Chicago and less than a quarter of a century ago One of Chicago's old surgeons has told me of a time when a doctor was accompanied by a squad of police when he went to a factory or tenement to do vaccinations This same surgeon was once called into a house, from the street, to see a man who was " dying " The doctor wore a high hat and carried a large operating case and was thus recognized as a physician by some one who ran out of the house looking for one of that profession It was a thickly populated tenement house and neighborhood He found an invalid on a bed and apparently dying of asphyxia The man's dinner stood on a table by the bed and this led the doctor to think he was choking from a morsel of food A hasty examination proved this to be the case but as he was unable to remove the food quickly, he took a scalpel out of his case and did a tracheotomy The patient began to breathe and in a short time was out of immediate danger Meantime the friends and neighbors, who had crowded into the room, saw with horror the stranger plunge his knife into the patient's throat They instantly scattered leaving their friend in the hands of the doctor, and spread the report that a doctor had cut the sick man's throat and killed him A cry for vengeance went up and by the time the doctor had removed the obstruction from the throat of the patient he found himself beset by an angry crowd bent on his destruction He threw off his coat and taking a large amputating knife in each hand he offered with much energy and some profanity to disembowel all comers The more aggressive who had gotten into the room were now only too eager to get out and a scramble through the door resulted, again leaving doctor and patient sole occupants of the room The former kicked out a window and shouted lustily for the police Fortunately an officer heard his shouts and hurried to his relief, but could not make his way into the house While he went for help the doctor kept the mob at bay with his knives and a judicious use of his extensive vocabulary of profanity It required the combined efforts of a dozen policemen to raise the seige and rescue him from his perilous position But for the fortunate circumstance of his having his operating case with him, he would probably have been killed

There are now districts in every large city in this country where a man would not be safe under similar circumstances It has been but a short time since a man was shot and killed in Kentucky because it was thought that he might carry smallpox through a "shot-gun" quarantine I will guarantee that before twenty-three store " holdups" could be committed in the city of Mexico as has happened in Chicago the robbers would be shot and the epidemic stopped Superstition and a fear of anything new or unusual or not understood is a thing of which no clime, country, or people can claim a monopoly We can not afford to throw stones very vigorously yet awhile

When the average man arrives in a foreign land with the intention of making it his home he is very prone to find many things which need reforming and he may be sufficiently enthusiastic and guileless to embark in the undertaking

Soon after my arrival in Mexico I noted one custom which needed reforming As it related to the taking of medicine and as I was both a druggist and a doctor and dispensed my own medicine, I thought that no other could do it quite so well—indeed I, like the preacher, felt "called" to the work

Medicines are prescribed and taken in doses ranging from a tablespoonful to half a cupful Infusions and decoctions are much used and consequently popular This was the custom which I set myself the task of reforming In pursuance of this plan of reform I provided myself with a silver teaspoon which I purposed showing to my patients when giving directions so that there could be no mistake regarding the size of the spoonful directed

The "reform" went along swimmingly till one day a man came in who was suffering from a distressing cough I made up for him a two ounce mixture, each drachm of which contained—5 grains of muriate of ammonia, 1-16 of a grain of tartar emetic, 20 minims syrup of ipecac, 10 minims of tincture of squills and syrup sufficient to make up the teaspoonful I directed him to take a teaspoonful every two or three hours till expectoration was free

The next day I got on the train to go to a neighboring city In the baggage and mail car there was a small room containing a desk and a cot for the use of the conductor After the train started I went from the first class coach, through the second and third class coaches to the baggage car, into this room and lay down on the cot I was just falling into a doze when the door opened and some one stepped in I supposed it was the conductor and at first paid no attention to him But as he stood still and did not speak, I presently looked up over my shoulder and there stood my patient of the previous evening For a moment neither of us spoke, nor did he move, not so much as a cough escaped him Then he shot out a hand toward me and in it was the bottle of medicine I had given him the night before, half an ounce, or less, of the medicine still remaining Accompanying the gesture, he said, " see that?" I replied, "yes, that looks like the medicine I gave you last night " He said, "Yes, it is, I take one dose and now damn you, you take some," at the same time drawing from his clothes a "six shooter" and holding the muzzle two inches above my nose I measured the "gun" carefully with my eye, it was about two or three feet long and had a bore about the size of my coat sleeve! I could look directly into the barrel and see that it was loaded to the muzzel with coupling pins and links and other railroad iron Visions of coffins, graveyards and funeral processions passed dimly before my eyes, but whether the "gun" was loaded with them too, I did not know Remembering that I belonged to an arbitration society, I was inclined to be conciliatory, so I said "Certainly, I'll take all of it, if you like " Suiting the action to the word, I turned up the bottle drank about a teaspoonful, smacked my lips and said "That's all right, now if you take it according to directions it will cure you "

He took the bottle from my hand, put it in one pocket, the revolver in another and went out, Then I thought He took one dose, in that he got at least ¾ of a grain of tartar emetic, 60 grains of muriate of ammonia, 4 teaspoonfuls of syrup of ipecac and 2 teaspoonsfuls of tincture of squills That dose he took last evening at about 7 o'clock and then he was coughing very vigorously, this morning at 10 o'clock I did not notice him cough at all

When a man puts his hand to the plow and the plow strikes a stump, sometimes it is better to turn back From that time on I believed in large doses Thereafter when a patient brought me a quart bottle for medicine and I wanted to give him eight doses, I put in the proper quantity of medicine, then filled the bottle with water and directed—eight tablespoonfuls every hour

One day I received a telegram asking me to meet a train and take off a sick passenger I went to the depot and when the train arrived, the conductor stepped off and told me that one of the passengers had been taken with a fit and the train crew would like to be relieved of the responsibility of his care I took the patient off the train and he was able to walk, with the assistance of two men, to the hotel which was a block away They were obliged to stop frequently as his arms and legs would jerk in a way which was alarming to his conductors and to himself After I got him in bed, I asked whether he had been taking any medicine At first he said no, but afterward, recollected that he had taken a dose a short time before the "fit" came on The doctor who had given it told him to take a teaspoonful Having no teaspoon, he drank out of the bottle that amount, as he supposed I looked at the bottle and estimated that he had taken about five drachms He had taken but one dose and the bottle was full when given to him The label informed me that each teaspoonful contained, among other things, 8 minims of Squibb's fluid extract of nux vomica On the slightest movement his muscles would jerk and twitch in a most distressing manner He said he had what seemed an uncontrollable desire to kick and strike and jump about in every direction and it was only by the exercise of all the power of his will that he was able to refrain from doing so

I told him that his recovery depended on his ability to lie perfectly still I gave him a sedative and he remained quiet but wide awake for six hours when he slept, and next morning was well

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REPORT OF A CASE OF COMPOSITE MONSTER—MONOMPHALIC ISCHIOPAGUS

Read before the Chicago Pathological Society June 8 1896

BY ELIZA H ROOT, M D
PROFESSOR OF OBSTETRICS NORTHWESTERN UNIVERSITY WOMAN S MEDICAL SCHOOL ATTENDING OBSTETRICIAN TO WESLEY HOSPITAL ETC

M J, Swede, blonde, age 26, domestic, primipara, entered the Chicago Hospital for Women and Children, March 18, 1893 Last menstrual period July 7, 1892 Patient was delivered May 4, 1893, 301 days from the beginning of last menstruation

On entering the clinic the patient was pale and passing albuminous urine with low specific gravity, in excess of the normal quantity in the twenty-four hours Under treatment the albumin disappeared, to again return for two weeks preceding labor The patient complained of the weight of the tumor and of pain along the line of Poupart's ligaments

Examination —Inspection found the abdominal tumor very large and prominent, abdominal muscles tense and the skin greatly stretched, size of pelvis normal

Palpation discovered two heads in fundal zone of the uterus and to right of median line The head of the posterior fetus lay deeply in relation to the anterior uterine wall Back of anterior fetus easily followed to breech into the iliac fossa (left) Fetal heart sounds were heard above umbilicus, a little to left of median line Second heart sounds not heard Although polyhydramnios was present, the uterine contents were not freely movable, except the head of the anterior fetus and at no time could the extremities be determined Internal examination found anterior vaginal fornix empty

Diagnosis —Twins, first, breech sacro-anterior, and second, breech sacro-posterior, both oblique (the vertical axis of the uterus in median line), with a provisional diagnosis of "something unusual, perhaps a double-headed baby " This last was made only half in earnest, for the idea of a composite monster had not taken serious hold upon my mind On April 18, albumin reappeared in the urine, urine excessive in quantity, frequently amounting to 90 or more ounces in the twenty-four hours The patient complained of feeling dull and weary The tumor was very large and hanging well forward The bowels were kept free with small daily doses of Epsom salts Blaud's iron pill was given for the anemia April 29, patient restless and does not sleep well, excessive amounts of albuminous urine continues to pass May 3, patient began to have slight uterine contraction-pains During the night labor was established As there was no progress made of the presenting parts, the pains being strong, the house physician called me to the hospital on the morning of May 4 I found the os well dilated, the membranes ruptured, and a presenting mass only partly engaged in the inlet The examining finger found no feet, no namable part and slipped into a rather large orifice guarded by a border of loose folds It was very evident my provisional diagnosis was more than true, and that I was confronted with a difficult and dangerous labor Dr John Bartlett kindly responded to my call for assistance The patient was put to sleep with chloroform and the pelvis explored which confirmed the diagnosis of double breech presenting Pains continued strong and we proceeded to deliver The obstetrics of the case is of considerable interest Given a square mass present-

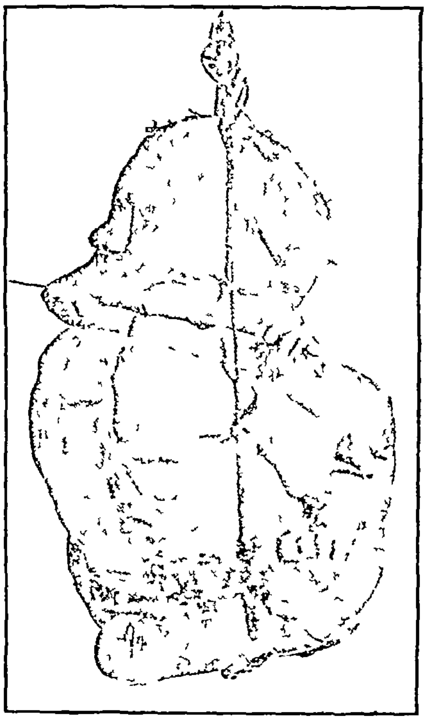

FIG 1—Anterior view with foot of posterior fetus in front

ing, the feet not being found, it was fair to assume that the legs were extended, giving in each a breech presentation of the incomplete variety The application of forceps proved useless, and further examination found the right limb of the second sacro-posterior fetus resting transversely upon the anterior ramus of the pubis (see photo Fig 1), the hip caught above the brim and preventing descent All efforts to push the limb out of the way were fruitless as it had become firmly impacted between the fetus and pelvic brim

The posterior limb of the first sacro-anterior fetus was seized and brought down giving some increase of space and a handle for traction Descent was still unsatisfactory, and another limb, the posterior limb of the second sacro-posterior fetus was with difficulty brought down, but securing more space, partially breaking the wedge and giving an added means for traction To and fro movements with strong traction upon the disengaged limbs brought the double breech well into the pelvic cavity

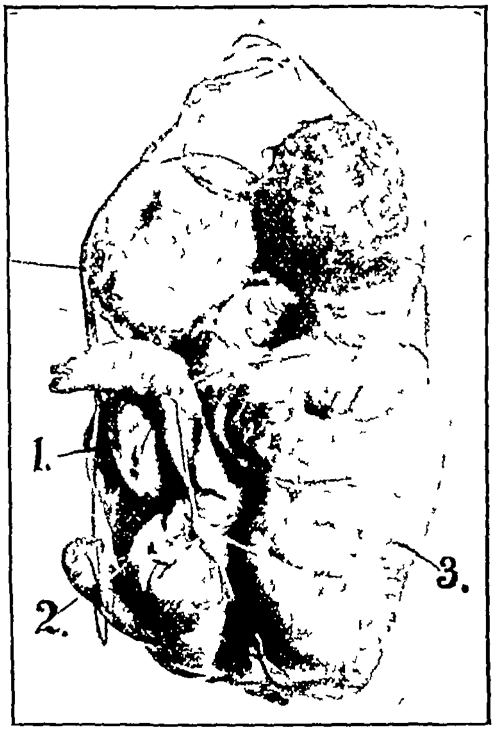

Fig 2—Left lateral posterior view approximating true position in utero 1 first sacro anterior 2 foot of posterior fetus, 3 second sacro posterior

Advancement was now progressive though slow and difficult The finger could now be hooked into the groin of the transversely lying limb of the second sacro-posterior fetus This limb was now gradually pushed upward by the descent of the mass and became extended parallel to the trunk of fetus, which with the remaining anterior limb of the opposite fetus acted as a splint, making the crossing of the pelvis and advancement into the axis of the outlet extremely difficult

At the expiration of two hours our combined efforts brought the double breech, partially rotated into the vaginal opening The two unborn limbs were disengaged and the true nature of the deformity became evident

As advancement of the two trunks together would further complicate labor by bringing the two heads face to face into the inlet the two bodies were separated at the pelves The now second sacro-anterior fetus was brought down and passed the now first sacro-posterior fetus until the nape of the neck could be reached for decapitation Delivery was soon completed without hemorrhage Traumatism of cervix and vaginal walls was considerable, the perineum was ruptured and repaired with sutures of silkworm gut The placenta came without difficulty and weighed 3½ pounds Aseptic occlusion pad was applied to vulva and the patient put to rest greatly exhausted, pulse 150, temperature 100 6 F

Morning of May 5, temperature 98 6, pulse 126 Evening of same day temperature 99 6, pulse 90 Patient could not move her lower extremities and the urine escaped without the patient's knowlege Albumin in the urine abundant

Recovery was uneventful though slow, the temperature rising on May 7 to 100 4 with slight headache, pulse 100 May 23, urine normal in amount for the twenty-four hours with only a trace of albumin, patient anemic June 24, the patient left the hospital in fair health Traumatisms healed by granulations The fetus, female, combined weight 11½ pounds, of nearly equal size and perfectly developed to the umbilicus Celosomic, the liver of the second sacro posterior fetus small and deformed, protruded into a sac formed of part of the transparent membrane enclosing and common to both abdomens

Umbilical cord eighteen inches in length, "fat," was attached to the abdomen of the second sacro-posterior fetus at or near the outer angle of the abdominal junction, which formed a sharp groove similar to that formed in a dress shield, and on the margin of the incompleted abdominal wall At the umbilical site of first sacro-anterior fetus was an anus-like opening guarded by a few scattering stiff and short hairs resembling the rictus bristles of a bird This proved to be the opening of the urachus, developed and serving the purpose of a urethra, there being no urethral opening in the natural or normal situation, the bladder ending in a blind pouch, the bladder receiving two ureters in a normal manner, one from a kidney of each fetus There was only a vaginal orifice unsphinctered and guarded by a loose fold of tissue bearing little or no resemblance to normal structures Vaginal canal large and received the single cervix of a two-horned uterus, ovaries and tubes normal, kidneys two in number, right kidney normal in size and location, left lobulated and situated in the hollow of the sacrum, second sacro-posterior fetus possessed three kidneys, the left situated lower than normal, while a second rested upon the promontory of the sacrum to the right of its median line, its convex outer border looking to the left as if a left kidney had slipped down from its place The third and right kidney was undeveloped, with a helix that received blood vessels but gave off no ureter The bladder received two ureters, one from a kidney of each fetus as in the preceding case The meatus urinarius opened normally into a fairly developed vestibule that is guarded by two folds Nymphæ minoræ that hooded a well developed clitoris The labia majora are loose rudimentary folds bearing some resemblance to the normal structures The vaginal canal is large, and receives a double cervix of a two-horned uterus, but one cervical os Ovaries and tubes are normal In both cases the ovaries of each uterus rested, one in the pelvic cavity of one fetus its fellow in pelvic cavity of the opposite fetus Both uteri were two horned The bladders are located in front of the uteri and the rectum descended between them in relation to the posterior surface of each

Intestinal canal Small intestines in two sets, one for each fetus Until near the cecum they united forming a large intestine or colon, sigmoid flexure and rectum common to both

The appearance of the external parts are peculiar The coccyx of each protrudes, forming a process about the size of a filbert In normal relation to each is an anal depression or pit, directly between which is located a perfect anus common to both children To the right and left of the perfect anus are the rudimentary pudenda The extremities upper and lower, are well developed and the heads well shaped

DISCUSSION

Dr Joseph B DeLee—This is a very interesting and unusual monster, the termination being favorable to the patient When we consider the immense amount of dystocia monsters like this can cause, and the difficulties attending diagnosis and treatment, we can not but congratulate the Doctor It is a peculiar fact that double monsters are said to cause much less dystocia than single ones Professor Hohl in 1850 collated the statistics on the subject and found that 55 per cent of single monsters caused dystocia, while only 38 per cent of double monsters caused it One reason is that single monsters are so likely to have displacements, such as transverse and other positions, and a large number of this class of monsters is due to hydrocephalus and enlargement of the abdomen or other cavities Whereas double monsters will abort frequently, single monsters go to term I remember in Berlin to have seen an abortion of three months in which there was a perfect miniature representation of the Siamese twins The two fetuses were united together at the xyphoid appendix In regard to the diagnosis of the double monster, there is hardly a case in which a diagnosis of it is positively made before labor The majority of cases have gone to labor, and only when there has been obstruction has a diagnosis been made Even then, a number of cases are difficult to diagnose, particularly where there are twins, one across another, or the two heads entering the pelvis at once or two breeches In a single monster the diagnosis is easier I have seen a diagnosis made of anencephalus through the abdomen by determining the breech in the fundus and no head over the inlet

The Doctor has dealt with the division of monsters largely from a pathologic aspect What has interested me in studying double monsters is the clinic aspect, because it is more important to the practitioner G Veit has written a monograph on the subject He divides monsters into three forms First, those where fission begins on top The top of the monster is divided into two parts, either two heads or two faces stuck together, or the division proceeding further down, so that there are two complete heads with either one or two arms on each side The second division is monsters united by fusion Craniopagus, either front or back, vertex or face, ischiopagus I think the Doctor's case was an ischiopagus in which there was dystocia of a double monster Being united end to end, the children should have been delivered one after the other but for some reason they became doubled up like an U and thus offered almost insuperable obstruction to labor The third division comprises monsters with a point of union near the middle of the trunk The fission is both from below upward and above downward Example, the Siamese twins

In the treatment of this form of dystocia the plan works nicely also First group, fission at either end, for example, a diprosopus (two faces) Here you would do a version or craniotomy, it being simply the size of the part causing a mechanical disturbance In general, breech presentation is more favorable in labor with monsters, because there is something to pull on The second division of the first class, where the fission is from below, the dipygus, there being two to four legs In general, traction on one or two legs will not bring the others down, you must get all there are and make traction on them

The second class of monsters, where the bodies are joined end to end, seldom give trouble, as they slip through as a long cylindrical mass This was the case of the ischiopagus monster exhibited in the museums here about six years ago

The third division, the thoracopagi, the xiphopagi, give the most trouble Since the band of union is often very movable it is possible to deliver one child by version and extraction and then the other likewise Or in certain cases, bring down all four extremities, now deliver the rear child, then the other Generally, it is a bad plan to amputate the parts which are born, true you get more room, but it disturbs the relations of the parts and you lose a good handle on which to make traction

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PRIMARY SARCOMA OF THE TAIL OF THE PANCREAS

Read before the Chicago Pathological Society, June 8, 1896

BY FRED J E EHRMANN, M D
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Sarcoma has been found in almost all parts of the human body where mesoblastic tissue occurs The frequency of its place of origin, however, varies greatly so that sarcomata in some locations are common, in others almost unknown Thus primary sarcomata of the bones, eye, kidney, glands, brain, etc, occur with relative frequency, but primary sarcoma of the pancreas, for instance, is very rare This statement is substantiated by our best known writers, some of whom emphasize their rarity, others make no reference to primary pancreatic sarcomata at all Thus Ziegler[1] writes that such growths are extraordinarily rare and Orth[2] says that primary sarcoma of the pancreas is almost unheard of

To show the relative frequency of tumors of different varieties occuring in the pancreas, I may refer to Segrè's[3] table of 11,492 autopsies with 132 pancreatic tumors, of which 127 were carcinomata, 2 were cysts, 2 were sarcomata, and 1 a syphilitic growth Segrè fails to state, however, whether the sarcomata were primary or secondary

Some of the reports leave doubt as to the real nature of the tumor Thus E H Bartley[4] reported a case in 1880 of a patient who had vomited after meals, complained of pain in the epigastrium and emaciated rapidly The tumor was "a spindle-celled growth, probably a carcinoma of slow growth, a scirrhus cancer, or possibly a spindle-celled sarcoma" Bruen[5] in 1883 and C Workman[6] in 1892 described tumors of the pancreas, leaving doubt as to their real pathologic nature

In 1883 Chiari[7] reported a fair-sized sarcoma of the pancreas, but considered it secondary The patient was 43 years old, and the tumor is described as "a globular tumor in the head of the pancreas, soft, fragile, brownish-black, within a 2 mm thick capsule through which the tumor-mass protruded here and there There was also a brownish tumor in the omentum, in the fossa iliaca sinistra, and in the left eye, which probably was the primary tumor" Microscop ically the tumor consisted of spindle cells with brown pigment

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[1] Ziegler Lehrb d sp Path Anat 1892, 619
[2] Orth Lehrb d sp Path Anat 1887 ii, 904
[3] Segrè Schmitts Jahrb, Nov 15, 1889
[4] Bartley Annals Anat and Surg Soc 1880, ii, 495
[5] Bos Med and Surg J 1883 cviii 110
[6] Glasgow M J 1892 xxxvii 385
Virchow Hirsch Archiv 83 ii, 211

Litten[8], however, is the first one to report a primary sarcoma of the pancreas This occurred in a boy 4 years of age, who complained of tenderness over the abdomen and occasional diarrhea On examination a tumor, which filled the entire abdomen, was visible through the abdominal wall Nothing is said of the exact location in the pancreas of this tumor Microscopically he found a small, round-celled sarcoma

In the following year Briggs[9] reported a case where bloody vomit, fatty stools, emaciation, ascites and a fixed epigastric tumor existed The ascitic fluid was alkalin, turbid dark brown, of 1012 sp gr The pancreas, which was removed by operation, was examined with the following result "A sarcoma, although there is evidence of a preëxisting hydatid shown by the hooklets of the affection, with the cells of a spindle-celled sarcoma" In 1892 Garda y Mansilla[10] also reported a sarcoma of the pancreas

Of these seven cases the diagnosis is exceedingly doubtful in three, in the remaining four sarcomata existed and of these two were primary, one possibly primary and one secondary

It will have been noticed that where the location of tumors has been specified the head of the pancreas was their seat The case of which I make a report is a round-celled sarcoma of the tail of the pancreas The history is as follows

A G, a German widow, 56 years of age, a washerwoman, resident of the United States for thirty two years, had had a sense of weight in her epigastrium, frequent attacks of anorexia and occasional dyspnea for two years Weakness gradually progressed so that she had been almost completely incapacitated for work some months before her admission to the hospital, on Sept 15, 1895 Three weeks before admission a dull, continuous pain began in the epigastrium accompanied by a slight cough with frothy expectoration, a dull pain over the anterior surface of the chest, aggravated on deep inspiration, constipation, pollakiuria and dysuria

The family history was negative She had had typhoid fever twice She had given birth to three healthy children, never had a miscarriage nor any puerperal fever

The examination made the day following the day of admission, showed the following Mind clear, skin dry and subicteric, nourishment fair, eyes sunken, pupils equal and reacting to light and accommodation, tongue heavily coated with somewhat dry margins

Heart Apex beat plainly visible in the fourth interspace, somewhat to the right of the left mammary line, the beat fairly strong on palpation The right border of the heart was at the middle of the sternum, the upper border in the second interspace, the left border at the mammary line The sounds were muffled, but no murmur could be heard

Lungs were resonant and the breath sounds audible all over, except below the ninth rib posteriorly on the right side There were few crepitant râles in the axillary region of the left lower lobe The epigastrium was more prominent than normal and quite tender

Liver extended from fifth rib to a point four finger breadths below the costal arch in the right mammary line, and reached beyond the left mammary line to the left Palpation revealed a hard, nodular border near the right iliac crest, whence it could be followed to a point about an inch above the umbilicus, where a large notch was present From this point the border descended to the left to a level with the umbilicus and continued on this level beyond the left mammary line The entire margin moved with inspiration Beneath this edge to the left of the umbilicus there was a distinct, firm, tender mass, about the size of a chicken's egg, which did not descend on inspiration and could not be displaced upward

The bones of the body were negative The glands of the lymphatic system were not enlarged and no edema existed

On admission the temperature was 100 6 degrees F and four hours later reached the highest point recorded, 102 8 degrees The respirations varied from 30 to 36 and the pulse from 96 to 120 Preceding her death, which took place on Sept 25, 1895, the temperature became subnormal No sugar was found in the urine and the feces were never examined

The postmortem examination was made sixteen hours after death The body was fairly well nourished, skin subicteric, there was the usual posterior lividity in moderate degree

The heart was larger than its owner's fist and flabby, subepicardial fat was abundant on the anterior surface and along the course of the vessels petechiæ were to be seen The mitral orifice admitted three finger tips, the tricuspid four Both semilunar valves were found competent to the water test The free margins of the aortic valves were thickened The left ventricle was 7 cm deep and its wall measured 1 5 cm in thickness on the average The right ventricle was 8 cm deep and its wall averaged a thickness of 3 mm The myocardium was pale The aorta was slightly dilated, the intima thickened in areas

The pleural cavities were free from adhesions The right contained about 6 ounces of clear, straw colored fluid On the visceral pleuræ of both lungs there were quite firm, whitish areas of about 2 mm diameter The lungs had pale, translucent margins and contained a quantity of frothy fluid The right lung was adherent to the pericardium

The peritoneal cavity contained a considerable quantity of straw colored fluid The peritoneum was smooth and shiny

The liver reached almost to the right iliac crest and almost to the umbilicus in the midian line It weighed 5590 gms It measured 35 cm from right to left, the right lobe measured 32 cm from above downward, while the left measured 22 cm The liver was 13½ cm thick A deep and wide furrow extending transversely over the anterior surface of the right lobe permitted of great mobility of the lower one half on the upper The surface of the liver was grayish and was studded with slightly raised, firm areas, varying from the size of a pea to that of a walnut Similar areas were found throughout the parenchyma of the liver, some were pale and hard, others had a dark periphery and a softened, pale center and all could readily be peeled out

The stomach was completely covered by the liver At the cardiac end it was adherent to a tumor mass behind and below it Its wall was not infiltrated as far as could be seen with the naked eye, and its mucous membrane was normal The intestines were normal

The tail of the pancreas merged into a tumor mass situated in the region of the left suprarenal capsule After the organs of this region were taken out *en masse* it was found that the kidney, suprarenal and spleen could be readily and completely removed The tumor was nodular, measured 7 x 7 cm and was quite firm The cut surface showed a pale lower half which was distinctly continuous with the pancreas, the upper one half was of a pinkish color The spleen was negative

Both kidneys were of about normal size, the capsules were adherent, the cut surfaces were pale and the cortical markings were indistinct The renal pelves, ureters, bladder and suprarenal capsules were normal

The uterus had a pedunculated, pea sized body protruding from the os, which was connected with the cervix The ovaries were hard and almost cartilaginous The nervous system was not examined Enlarged glands were found at the celiac axis

The anatomic diagnosis was Pulmonary emphysema and edema, fatty heart, atheroma of the aorta, adhesive pleuritis, chronic nephritis, uterine polypus, atrophic ovaries, primary tumor of the tail of the pancreas, secondary tumors of the liver and pleuræ, secondarily enlarged celiac lymphatic glands

The microscopic examination showed the tumor in the tail of the pancreas to consist of small round cells without any definite arrangement, imbedded in a stroma which in places was very finely fibrillated, in others more coarse and fibrous There were large vascular channels and areas of hemorrhage throughout the tumor The nodules in the liver and the pleuræ showed the same structure

Conclusion In the foregoing has been described a small round-celled sarcoma of the tail of the pancreas with secondary tumors in the liver It is believed that the primary tumor originated in the substance of the pancreas, because of the intimate connection between the pancreatic tissue and the tumor, which appears to be continuous with and to replace the structure of the pancreas The tumors in the liver and pleuræ were man[illegible] metast[illegible] [illegible]nd the logical conclusion would be that in the absence of any other primary tumor-focus this case will have to be interpreted as one of primary sarcoma of the pancreas

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[8] Deutsche Medizin Zeit Oct 22 1889

[9] St Louis M and S J, 1890, lviii, 174

[10] Garda y Mansilla Progresso med e farm Madrid 1892, i, 77

On account of this very unusual location of the sarcoma, it was concluded that the case merited the forgoing brief report

LIPOMA DEVELOPED IN THE UPPER END OF THE SEMITENDINOSUS MUSCLE

Read before the Chicago Pathological Society, June 8, 1896

BY GEORGE H WEAVER, M D
Professor of Pathology Northwestern University Woman's Medical School Instructor in Bacteriology Rush Medical College, Chicago
CHICAGO, ILL

This specimen is presented, not because of its being a lipoma, but since it is interesting from its location and considerable size There is no clinic history of the case and the tumor was discovered accidentally in a subject in the dissecting room of Rush Medical College during the winter of 1893 A student called my attention to a swelling in the upper and posterior part of the thigh of a male subject, which he had not noticed until after the removal of the integument As it appeared with the covering of fasciæ an abscess was suspected There was a sensation on palpation suggesting fluctuation, which was felt transversely through the tumor, but not in the vertical direction On dissecting down to the tumor it was found to be located in the semitendinous muscle at its upper end, extending from the insertion of the tendon to the tuberosity of the ischium downward The muscle separated easily and naturally from the surrounding structures The tumor was oblong, five inches long and three inches in diameter transversely at the center Its surface was smooth and even, and covered everywhere by the fibers of the tendon and muscle, which had been uniformly spread out over the surface On section it was found to be a lobulated lipoma A small calcareous nodule was located in the upper part at some distance from the bone Ziegler (Lehrbuch der Speciellen Pathologischen Anatomie, Jena, 1890) places lipoma of muscles among the uncommon tumors Sutton (Tumors, Innocent and Malignant, 1893, Philadelphia) says that many examples of fatty tumors occurring in the midst of muscles have been reported and are of interest from the trouble they cause in diagnosis He says they have been found in the deltoid, biceps, humerus, complexus and rectus abdominalis in the muscular tissue of the heart and in the middle of a submucous myoma of the uterus Senn (The Pathology and Surgical Treatment of Tumors, 1895, *Philadelphia*) *says that* lipoma inside the tendon sheath springs from the adipose tissue of the mesotendon and that it usually develops as a multiple tumor which presents an arborescent appearance and is easily mistaken for tuberculosis of the tendon sheath and for flexiform neuroma The present instance does not correspond to the variety described by Senn, and does not differ in its appearance from a lobulated lipoma in the subcutaneous tissues From its deep location and the sensation of fluctuation imparted to the fingers on palpation, it might readily have been mistaken during life for an abscess

Chair of Massage—The *Progrès Méd* mentions as a fact unique in Europe that the University of Berlin has created a professorship of massage and orthopedia

THE DEGENERATE JAWS AND TEETH

Read in the Section on Neurology and Medical Jurisprudence, at the Forty seventh Annual Meeting of American Medical Association, held at Atlanta Ga May 5-8 1896

BY EUGENE S TALBOT, M D, D D S
FELLOW OF CHICAGO ACADEMY OF MEDICINE

(Concluded from page 1202)

Modification of the V-shaped arch results from modification of the above named conditions A difference in the time of eruption of the cuspids, everything else being equal, effects a difference in the space left for their accommodation and thus partial V-shaped arches (Fig 55) are found The keystone, the cuspid, is not entirely outside or inside of the arch in the partial V-shaped form, but may appear partially crowded out of place Hence, the arch is neither a normal curve nor wholly angular, but unites the characteristics of both Its lateral diameter is less than that of the normal arch, giving a contracted appearance Thus a number of varieties of the fundamental forms of the V-shaped arch are formed differing in degrees of anterior contraction All of these result from the comparative thinness of the anterior portion of the process offering but little resistance, an abnormal pressure from behind, and the greater strength of the cuspids which cause them to seek room irrespective of the space left for them When one side of the process near the symphysis is the stronger, thus affording greater resistance, or the pressure from the cuspid is less, that side may maintain its normal relations, while the other may give way to conditions resulting in a V shaped contraction The curve will then be broken not at the apex of the triangle, but near it, the incisors will overlap, and when pressure from the cuspid acts on the weaker column it must give way This results in the semi-V-shaped form (Fig 56) When the permanent bicuspids erupt under a favorable condition, so that their greatest diameter is in a line with the greatest

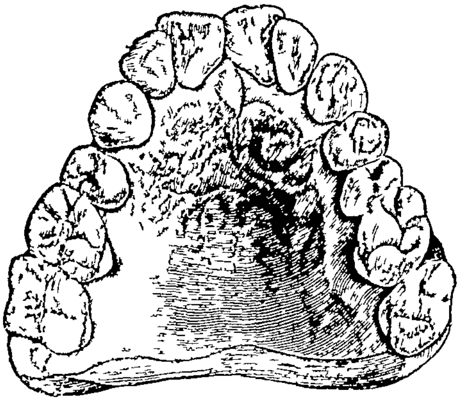

Figure 55

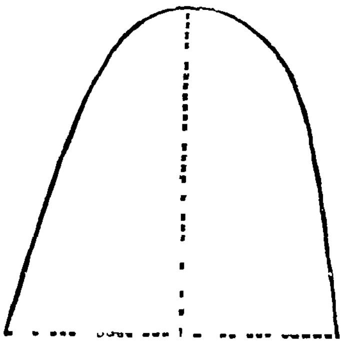

Figure 56

diameter of both cuspids and first molar they will be held firmly in place since the greatest pressure is on this very line On the other hand, when the bicuspids are erupted after their proper time while the cuspids progress duly, the cuspids, meeting with no resistance, fall into their proper places, but the bicuspids adapt themselves as best they can to the space left for them, and if the arch of the maxilla does not coincide with that of the crowns they must fall within or without the arch Now if the first molar has moved forward, diminishing the space, the bicuspids must erupt either within or without the arch

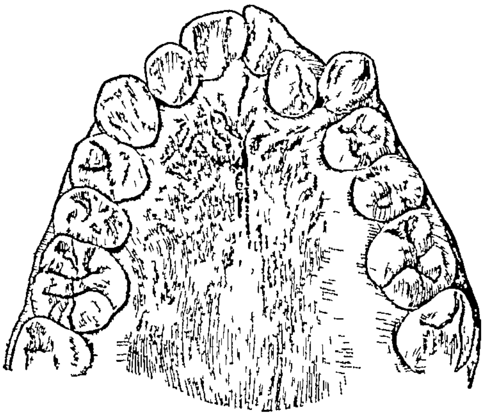
Figure 56

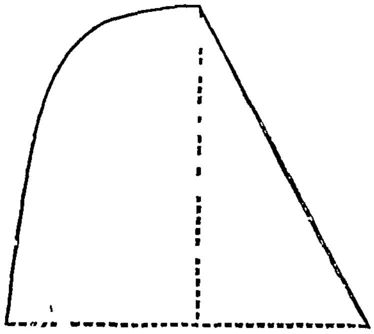
Figure 56

To understand why they are generally found within the arch the shapes of the molar and cuspids must be kept in mind A transverse section of their crowns shows their proximal walls not to be parallel but wedge-shaped, their diameter being greater on the buccal than on the palatal side When the crowded bicuspid falls within the greatest diameter of these teeth, finding more room within the arch, they naturally slip in the direction of least resistance, *i e*, toward the palate A local cause for the same condition is found in the fact that the crowns of the bicuspids before their eruption are held between the roots of the temporary molars, and as these form an arch of a smaller circle than that of the permanent teeth, the bicuspids will be found generally inside the arch From both causes we have an inward curvature which we term the saddle-shaped arch (Fig 57) It should be noted here that while the V-shaped irregularity is found anterior to the cuspid, the upper incisors are always projecting beyond the lower, the saddle-shaped irregularity is invariably posterior to the cuspid and the bicuspid form an inward curve The incisers never project Both forms contract the arch, the V-shaped anteriorly, the saddle-shaped posteriorly In both forms the forward movement of the first molar is the local cause When the unfavorable conditions that result in the saddle-shaped arch are not so pronounced we have the partial saddle-shaped arch (Fig 58) Thus because of the greater uniformity of the maxilla and of the arch of the crowns there may be more space and the bicuspids may be forced but little out of place, or the molar may move forward but slightly, interfering less with the bicuspids Sometimes it happens that in trying to adjust themselves to the limited space one bicuspid may be crowded outward and another inward Sometimes the first bicuspid is in, more frequently the second As has been stated before, this ought not to take place if the greatest diameter of cuspids, bicuspids and molars were in the same line, but the diameter of one of the bicuspids may be in a line with that of the adjoining tooth while that of the other is not, and then one is pressed along the line of the least resistance As in the case of the V-shaped arch one side of the mouth may be normal because of the absence of any local condition interfering with the space One temporary molar may have been extracted, allowing the permanent one to move forward while the other remains in place The result which follows is an asymmetry of lateral halves termed semi-saddle-shaped irregularity (Fig 59) How the V-shaped and saddle-shaped arch on one side only may be produced has already been described How they may be combined on one side remains to be explained Given thinness of process in the interior part of the mouth, premature or tardy extraction of the cuspid and there will be a forward movement of the incisors The development of the cuspid will press the alveolar process inward, thereby contracting the arch and the tardily erupted bicuspids will adjust themselves to the limited curve, as before stated In this way the features of the two forms are combined, that is, a contracted or angular anterior arch and a posterior arch that is more or less concave The opposite side may be V-shaped, saddle-shaped or normal (Figs 60 and 61) Deformities of the dental arch are due first to

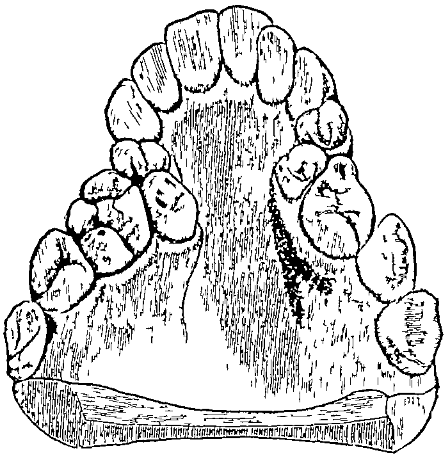
Figure 57

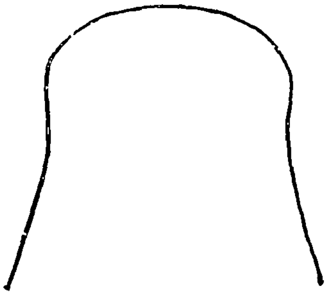
Figure 57

arrest of development of the jaw and, second, in the nature of the deformity to the order of eruption of teeth which rarely erupt (twice alike) is always local or mechanical From an evolution standpoint these deformities are atavistic The V-shaped reverts to the reptilian type The saddle-shaped to the mammalian Dr W C Barrett of Buffalo has frequently called attention to the shape of the anthropoid arch In the gorilla, the nearest to man in dentition, there is a very distinct approach to the saddle shape In the chimpanzee it remains The orang-outang exhibits a less tendency The arch of some of the cebidæ very nearly approaches man It all depends upon the extent of prognathism When that is reduced the arch appears, and rectangular arrangement of the teeth is lost Most carnivora exhibit a distinct approach to the saddle shape Some felines have a shortening of the jaw partially obliterating the tendency, but in most canidæ it is quite marked From the standpoint of comparative anatomy, Dr Barrett

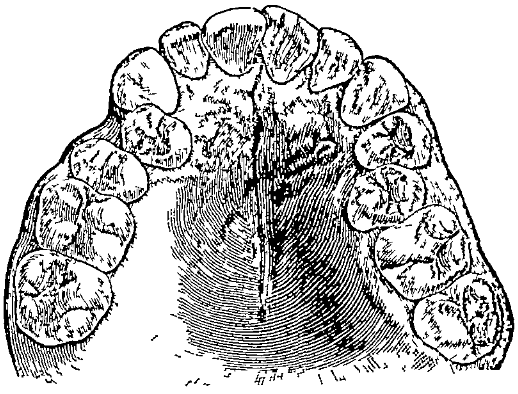

Figure 58

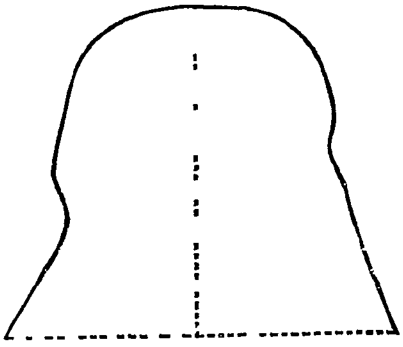

Figure 58

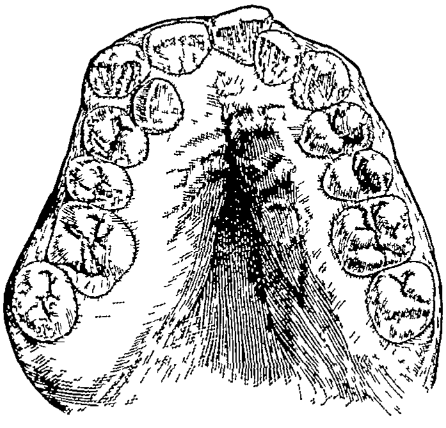

Figure 59

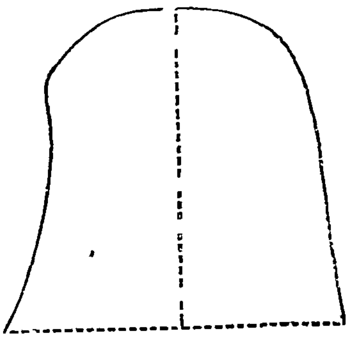

Figure 59

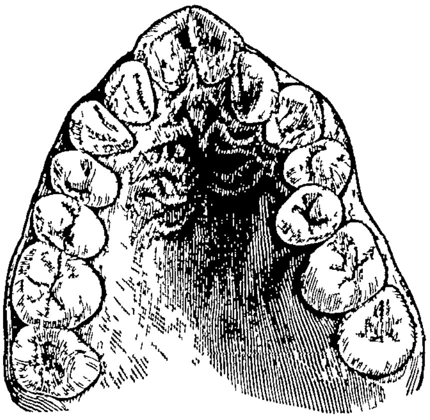

Figure 60

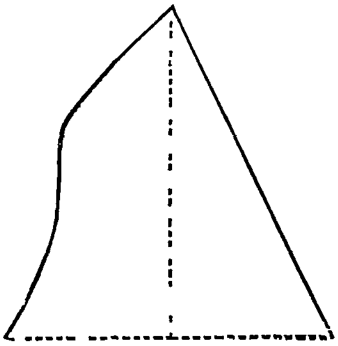

Figure 60

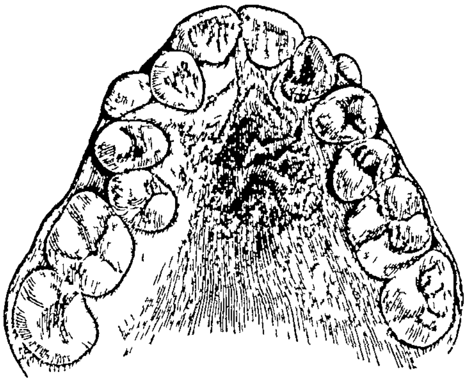

Figure 61

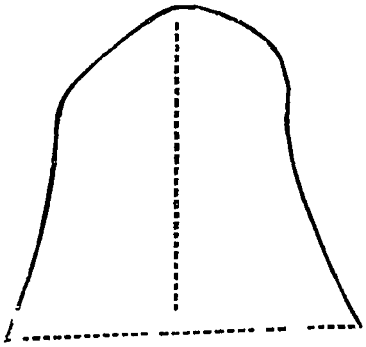

Figure 61

is of opinion that the tendency toward the saddle-shaped arch is a reversion to earlier form

These are facts which can not be overlooked, since from the very nature of development and eruption of the teeth they can not take any other form The arrangement of the crowns of the cuspid (canine) in the jaw before eruption is such that no matter what the local condition of the jaws or teeth may be, the V or saddle-shaped dental arch must be produced

In no symptom is degeneracy as evident as in the stigmata resultant on hypertrophy of the alveolar process This occurs at all ages, but more particularly at the period of development of the permanent set of teeth The entire alveolar process may become involved (Fig 62), or only a portion (Fig 63)

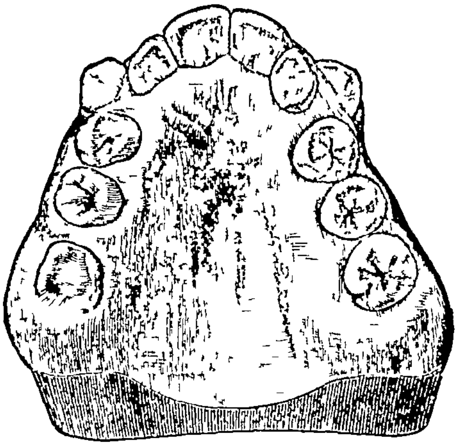

Figure 62

Hypertrophy of the alveolar process is the result of irritation incident upon eruption and the shedding of the temporary teeth, and eruption of the permanent teeth

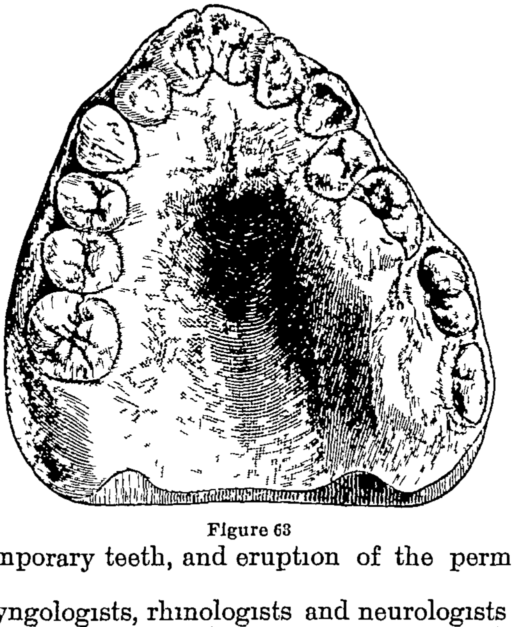

Figure 63

Laryngologists, rhinologists and neurologists claim that certain vaults are deformities, when in reality the alveolar process had hypertrophied

The jaws, as a whole, owing to an unstable and unbalanced nervous system, are liable to become excessively developed as well as arrested in development Excessive development of the superior maxilla is evinced by a fullness of the upper lip In these cases the upper maxilla is too large for the lower and stands out beyond it The lower may be quite normal When there is simply a want of proportion between the two jaws it is due to the diminutive or excessive size of one while the other is normal The criterion in these cases must be the facial angle The upper jaw is usually in harmony with the skeleton, while the lower jaw depends for its size largely upon function, its size being the result of accident rather than design

When the upper jaw is normal or smaller than the lower, the extent of its posterior portion is determined by the occlusion of the first permanent molar, which keeps the alveolar process in permanent relation to each other at this point and allows freedom of development in front If the occlusion is not normal, the upper jaw and alveolar process will develop laterally as well as anteriorly

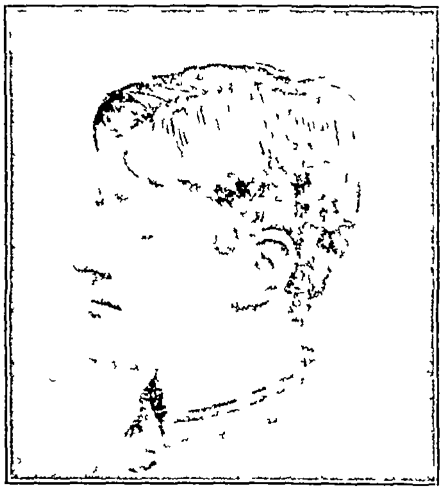

Figure 64

Figure 65

The teeth of the anterior columns may either stand vertically or they may be turned in toward the lower incisors The latter defection is produced by the action of the lips When the cuspids are in their normal position, the upper incisors form a larger arch than the lower, and this permits of their being turned inward, but when the cuspids have moved so far forward that they are not normally interlocked with the lower teeth, the incisors are too crowded to permit this While the jaws are growing smaller the teeth tend to cause reversion to the original form

Arrest of development of the superior maxilla is always associated with marked depression at the alæ of the nose producing the appearance of having been hollowed out from a point at the floor of the orbit to the grinding surface of the lower teeth (Fig 64) This is the most common type of degeneracy among criminals, and has frequently caused the error of assuming excessive development of the lower jaw, which is normal And the seeming excess is due to arrest of development of the upper jaw The lower jaw has in the scale of light gradually grown smaller Even in some apes it is still large The changes which have resulted in the negro jaw strikingly illustrate this alteration in size The lower jaw of the early negro in the South was unusually large The intermixture of white blood has decreased the size of the jaw until, where there is but a slight admixture of negro blood, the jaw is as delicate-shaped as that of the whites Prognathism of both jaws of the negro arises from the fact that as the lower jaw is much larger in proportion than the upper, the force exerted by the lower against the upper carries the alveolar process and teeth in their formative process forward This gives prominence to both upper and lower jaws, and its existence is easily demonstrated by examination of our large collection of negro skulls In the evolution of the race the lower jaw becomes smaller and harmony results in form and size

Arrest of the lower jaw (Fig 65) is common among degenerates This consists of a shortening of the body Sometimes it is arrested to such an extent that there is apparently no chin About 50 per cent of criminals at Elmira, N Y, had this deformity

The following table shows the number of deformities of the jaws and teeth among some of the degenerate classes

	Jaws										Teeth			
												Tubercles of teeth		
	Number examined	V shaped	Partial V	Semi V	Saddle	Partial Saddle	Semi saddle	Normal	Arrested development	Excessive development	Irregular	Present	Absent	Regular
Criminals at Pontiac, Ill	465	75	71	3	66	68	16	171			128	18	452	842
Criminals at Elmira, N Y	1041	381	49	1	157	26		422			220	26	1015	821
Criminals at Joliet Ill	468	18	79	19	59	92	24	163						
Prostitutes at Chicago Bridewell	30	10	17	7	27	10	10		1					
Insane at Dunning Ill	700	26	47		12			486						
Insane at Kankakee Ill	613	69	107	29	89	105	61	153						
Idiots, Imbeciles	1977	129	236		207			1095						
Deaf and dumb	1035	169	192		203			901						
Blind	207	7	9		11			105						
Inebriates[11]	514	1 5	24 4	0 3	9 3	13 2	7 7	25 4						

[11] Per cent

In conclusion, it may be mildly stated that if all structures are so affected as to cause harmony in all the parts, advance in evolution is going on, but if such conditions exist as noted above, degeneracy is resulting[12]

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[12] The illustrations for this article are taken from the following works The International Dental Journal The Dental Cosmos Diseases and Injuries of the Teeth (Morton and Smale) The Osseous Deformities of the Head Face Jaws and Teeth (Talbot) with a number of original cuts

Iridectomy in Russia —Out of the 27,966 patients treated at the Kasan Eye Clinic during the last ten years, there were 769 cases of glaucoma Iridectomy was performed in 189 cases The sight remained unchanged by it in 56 per cent, was improved in 25 4 per cent, and grew worse in 18 6 per cent

SELECTIONS

Hemiplegia Following Typhoid Fever—Dr W H Haynes of Brooklyn, contributes to the *Bulletin* of the Johns Hopkins Hospital a case of this rare complication F L, aged 30, single, and a railroad switchman by occupation His family history is unimportant and he had no illness, except a gonorrhea, till October, 1895, when he had an attack of typhoid fever, lasting twenty one days, during the course of which his temperature rose as high as 105 degrees F, attended by delirium On the fourteenth day his mother, who was nursing him, noticed that he did not move his left arm and leg as much or as well as the other, and that they felt dead and cold When he began to get up he could not stand on account of the weakness (he termed it) of his left leg Both upper and lower extremities felt numb Face and speech not at all affected No loss of sensation Nearly entire loss of motion of upper extremity, but not so profound of lower He remained in this condition for a couple of months, when improvement began, first noticeable in the leg, which became strong enough finally for him to stand upon and then to walk He is a man of short stature, weighing 133 pounds Face and speech show no lesion Left upper extremity shows marked atrophy, with half the power and motility of the right, can use it to help dress himself, but not to carry anything When he tries to raise up the elbow, suffers pain running down the outside of the arm from the shoulder and the elbow No loss of sensation or of heat or cold No dragging of left lower extremity, which is only slightly atrophied, with no loss of motion or sensation, only he says it gives out quicker than the other Tendon reflex at knee more marked than on right limb General health is good Heart and urine normal Electric contractility of upper extremity diminished This case differs from the others reported as occurring in the left side instead of the right (he is a right handed man), and there were no convulsions, aphasia or facial paralysis, but agrees with their subsequent history of slow repair

Congenital Absence of Thymus, Autopsy —Dr A Clark, in London *Lancet*, October 17, reports a case of absence of the thymus gland in a male infant eight months old The child was apparently well at birth and did not begin to sicken until about the sixth month of its age, when coldness and swelling of the extremeties and a tallowy complexion made their appearance The swelling gradually increased and spread in spite of diuretic and tonic treatment until the eyes were almost closed and hands, arms, feet and legs were so distended with fluid as to feel like a firmly stuffed cushion Two symmetrical ecchymoses, one of the inner side of each supra clavicular fossa and about the size of a florin, appeared The temperature remained normal and the pulse and respiration grew weaker as death approached, but were in no way remarkable

Necropsy —At the necropsy made twelve hours later, I found the right kidney healthy The left was about twice the size of the right, and its pelvis and ureter were dilated, the latter to the size of the little finger and the former to contain about two fluid drams There was no communication with the bladder on the left side, although the ureter was pervious as far as that organ The thymus gland was completely absent, the upper part of the anterior mediastinum being empty and the pleuræ in apposition There was no fibrous tissue to mark the position of the absent organ

Remarks —So far as I know, this condition of things is quite unique as regards the absence of the thymus gland, and is interesting as proving that it is compatible with fair health and normal development at all events, for the first six months of life The symmetrical ecchymoses arising without apparent cause harmonize with the recorded connection between this gland and hemophilia I think that the renal abnormality only contributed in a subsidiary degree to the fatal result, as the hydronephrosis was slight and the right kidney quite healthy and apparently adequate for the necessities of the body, for no uremic symptoms were present, and the urine passed was not deficient There were no symptoms of acromegaly The diges tive functions improved under treatment and the appetite remained good to the last

Renipuncture in the Treatment of Albuminuria—Mr Reginald Harrison in the London *Lancet*, October 17, is reported as having addressed the London Medical Society on the above subject He said that certain cases of albuminuria had come under his notice in which he had performed an operation for the relief of some morbid condition which was supposed to exist, but was not found when the kidney was exposed, the symptoms, however, were relieved and the condition of the urine improved This had led him to think that in certain cases of albuminuria good might result from puncture of the kidney

He related three cases in which he had so exposed the kidney 1, a boy aged 18 years was suspected of having suppuration around the kidney following scarlet fever There was lumbar pain, and the urine was albuminous and contained casts A small lumbar incision was made and the kidney found to be tense and engorged An incision was made through the capsule, and there was a full discharge of blood and urine, the wound healed the tenth day The urine now became abundant, the albumin lessened, and then disappeared altogether, the boy making a good recovery 2, that of a man aged 50 years who worked underground He had presented symptoms of renal calculus for some time Three months after being first seen his urine was constantly albuminous, and he had pain in the right lumbar region The kidney was exposed, but no stone was found The condition of the patient improved, the urine became normal, and the patient remained in good health 3, that of a woman aged 44 years, who had had hematuria for one year and pain on pressure over the left kidney with albuminous urine at times There was some history of her having passed a calculus at one time A lumbar incision was made and the kidney was found to be swollen and tense This was incised and free drainage of urine and blood ensued The woman recovered, the urine becoming normal The first of these cases he considered to be scarlatinal nephritis, the second to be due to cold, and the third a subacute attack following influenza He then referred to two cases of movable kidney (published by Dr Newman of Glasgow in the *Medical Week*, Jan 6, 1896, p 29) in which the albumin and casts which were present before the operation disappeared entirely after the kidney was fixed, and also to another case under the care of Dr Hoeber of Hamburg, in which relief had followed incision into the right kidney Having referred to the views of Sir Thomas Grainger Stewart and Sir Thomas Watson on the consequence of hyperemia in the initial stage of nephritis, he pointed out the disastrous effects which increase of tension produced in the eye and other organs, and the relief which resulted from operative interference The editorial comment on Mr Harrison's address will be especially interesting to those wide awake surgeons who allow even a surprise to serve as an experience

The editor says of the subject that it is a happy instance of the benefit which may be obtained from the careful consideration of unexpected results Many times have surgeons cut down on the kidney in a patient with severe lumbar pain, albuminuria and other renal symptoms, in the expectation of finding a renal calculus or some other gross lesion, and have been disappointed, and yet when the wound has healed the symptoms of which the patient has complained have completely disappeared The explanation that was usually given was that some constricting band had been divided or that the result was due to the effect of the operation on the mind of the patient, but there is much to be said in favor of the view put forward by Mr Harrison that the result in some cases at least is due to the relief of tension That increased pressure in the renal veins will lead to albuminuria and to a diminished secretion of urine has long been known The explanation is less certain, though numerous theories are not wanting, but whatever theory we may adopt to explain the presence of the albumin, or even if we consider none of those advanced to be satisfactory, yet we can not doubt that the venous congestion does give rise somehow to the albuminuria, and in active hyperemia of the kidney albuminuria is no less certain In other parts of the body more accessible than the kidney we can diminish congestion, whether arterial or venous in origin, by local blood letting, so we have good *a priori* reasons for thinking that it is possible to relieve a congestion of the kidneys by punctures or incisions, and if this were done it can not be doubted that at least in some cases the albumin in the urine would disappear and the amount of urine excreted would increase So many conditions that used to be considered wholly within the province of the physician have now come under surgical treatment that we can hardly be surprised at a further advance in the same direction, but no one anticipated that the aid of the surgeon would ever be invoked in acute nephritis and other allied pathologic conditions The matter is of course, not yet one on which a decided opinion can be expressed, for the cases are too few, but the unsatisfactory results of the treatment ordinarily pursued in albuminuria and in suppression of urine from nephritis are amply sufficient to justify a method of procedure which promises so much

PRACTICAL NOTES

Improving the Shape of the Ears—Joseph recently altered a boy's large outstanding ears by cutting out a wedge shaped segment, fifteen degrees, of the upper ear muscle, making the circumference 1 5 cm smaller —*Therap Woch*, November 1

Removal of Right Scapula and Caput Humeri—On account of a spindle celled sarcoma, Israel performed this operation on a clerk, who still retains the use of his arm to such an extent that he can write well and perform all his clerical duties —*Therap Woch*, November 1

Remedy for Spasmodic Uterine Contractions Occurring During Labor—Tincture of iodin 2 grams, alcohol 4 grams Take 5 drops of this mixture in half a glass of warm water every half hour The uterine spasm will pass away after the second or third dose in the majority of cases, but possibly a fourth or even a fifth may be required The sooner it is administered the greater its efficacy —Muller, *Semaine Médicale*, October 24

Case of Hypnotic Anesthesia—Starck of Heidelberg reports several cases of severe operations performed without pain in hypnosis, among them the infraction of a deformed femur on a patient who had been long confined to his bed He recovered consciousness during the operation and screamed, but was speedily put to sleep again His talipes equinus, which was exceedingly painful to the slightest touch, was also corrected by massage in hypnosis, and after the infraction had healed the patient was able to walk with ease —*Cbl f Chir* October 17

Traumatic Tetanus Cured by Phenic Acid—Cervellini reports a patient of 68 years, brought to him the eighth day after the development of tetanus, completely cured in three weeks by subcutaneous injections of 2 per cent phenic acid every two hours, with a full bath at 40 degrees C lasting two to three hours morning and evening He thinks that the disease imparts a tolerance of phenic acid so that large doses can be administered without fear —*Semaine Méd* October 14

Gastro enterostomy—The Souligoux method described in the JOURNAL August 22 page 450, is reported "marvelous" by

Chaput, who has tried it. Souligoux has had six absolute recoveries with it in ten cases of cancer of the stomach. Picqué reports four successes with it in five cases, the one failure really due to another cause. Doyen, on the other hand, says that although buttons are defective, this method must be absolutely bad, adding however that he has had no personal experience with it. Several cases of cicatricial stenosis of the pylorus or esophagus consecutive to acid burns, have been reported recently abroad, entirely cured by anterior gastro-enterostomy.

Treatment of Umbilical Hernia in Infants.—Lobas's method of treating umbilical hernia does away with the necessity of bandages, which are so apt to slip out of place, while it does not interfere with bathing the child. He draws up a couple of cutaneous folds around the navel and closes them over it with a soft pad of absorbent cotton between, holding them in place with strips of diachylon, from one and a half to two centimeters wide and long enough to reach from side to side of the abdomen, reenforcing this support with a couple of vertical strips of sparadrap. He renews the dressing once or twice a week.—*Semaine Méd.*, October 14.

Keratolytic Effect of Sodium Chlorid.—Simonelli has been investigating the effect of sodium chlorid on ulcers and finds that it has a most surprisingly beneficial action in producing healthy granulation, but that it fails to cause any growth of skin which must be secured by supplementary treatment. Several cases of torpid varicose swelling of several years' standing, were sprinkled with fine salt, when an abundant granulation ensued, proving it a highly efficient dermoplastic remedy. It causes smarting and burning at first, almost unbearable in some cases, but this is avoided by adding menthol to it in the proportion of 25 to 5, or 50 to 25.—*Gaz. degli Osp. e delle Clin.*, September 20.

Cardiac Disease in Children.—Dr. Pott in the "Fortschritte der Medicin," after a thorough sifting of some ninety-five cases, strongly corroborates the view that acquired heart disease is never primary, but always secondary to some acute infectious disease, particularly scarlet fever, acute rheumatism and occasionally pneumonia. In early childhood the rarity of scarlet fever diminishes its importance in the causation of heart disease, while rheumatic fever is the commonest cause in such early years; of seventy-eight cases of acute rheumatism with joint, twenty-one were under the age of 2 years. But a frequent cause of this ailment in children is the so-called masked rheumatism, a vague febrile condition associated with naso-pharnygeal catarrh, enlarged cervical glands, enlarged spleen and pains in the limbs, sometimes called herpetic fever.

Treatment of Pneumonia.—On the authority of Dr. George Hayem it appears that any nitrite in large doses is much less dangerous in this case than is commonly supposed. He finds that it transforms hemoglobin in the globule itself into methemoglobin without destroying the anatomic elements, without giving rise to globular anemia of alteration of the blood by globular debris. At a single treatment an adult can inhale from a compress held at half an inch from the nose 60, 80 or even 100 drops, in many cases a single inhalation being sufficient, in others two daily, morning and evening. This treatment is harmless and can be continued during the course of the disease and for two or three days after defervescence. It changes neither the duration of the disease nor the temperature range but relieves the dyspnea, liquefies the expectoration and diminishes the auscultatory signs.

Oligemia as a Cause of Death in Pneumonia.—Dr. Bollinger of Germany holds that croupous pneumonia is a typical local infectious disease, pursuing in the main a regular course, and that it is not essentially dangerous on account of the duration or the intensity of the fever. The impairment of the function of the lung he maintains is likewise insufficient to explain death, nor is the frequent edema in the spared parts of the lung the result of a passively increasing collateral hyperemia, but of cardiac embarrassment. He declares that the collapse symptoms are dependent upon oligemia, which leads to impaired nutrition of the cardiac muscle, already weakened by the fever and the extra demands upon it. Anemia of the brain, too, by causing disturbance of cardiac innervation, may be an additional factor. The exudate into the lung tissue may be likened to a venesection by the pneumococcus, which in a few days deprives the blood of a large quantity of important constituents. The reason, he says, why death takes place so early, and usually in the same stage of the disease, *i. e.*, from the sixth to the eighth day, is probably because the exudate must attain a certain acme before life is imperiled. By applying these facts to therapeusis it follows that beside the usual treatment every effort should be made to counteract the oligemia.

Filmogen in Dermato-therapeutics.—Collodium and traumaticin irritate the skin and fail to resist external influences, while they do not take up all medicaments. A solution of acetin and a preparation of collasin are used in the Paris clinics as a vehicle for cutaneous medication. Filmogen is a solution of nitrocellulose in acetone, with the addition of a little oil to prevent irritation. It forms a whitish or yellowish coat which does not irritate nor prevent the movement of the parts and is not dissolved by water, but is easily washed off with alcohol or ether. It prevents staining from the medicines used, while they produce the same effect as when used in the form of salve. It is especially adapted for use on dry dermatoses, as the acetone causes smarting on moist surfaces. A large number of medicaments are soluble in filmogen and the rest mix with it sufficiently for the purpose. As a smaller quantity is required than of collodium, the actual expense is no greater.—*Therap. Woch.*, November 1.

Section of the Cervical Sympathetic in Exophthalmic Goitre.—As mentioned in the Journal, September 5, Jaboulay has successfully performed this operation, and Abadie remarked at the recent French Congress of Surgery, that all the symptoms of the disease seemed to indicate that it was due to a permanent excitation of the vaso-dilating fibers of the cervical sympathetic or to their nuclei. The turgescence of the thyroid arteries leads inevitably to hypertrophy of the gland, which is thus secondary and not primary. The dilatation of the retrobulbar vessels produces exophthalmus, while tachycardia, we all know, can be and is caused by excitation of the sympathetic. Consequently section of the sympathetic should theoretically cure the disease, and experience has shown that it does conquer the exophthalmus, but how are we to get at the special nerves that are reponsible for the hypertrophy of the thyroid gland and the tachycardia? He suggested that possibly the cures obtained by ablation of the gland were really due after all to the mere fact that the proper nerve was divided. Jonnesco stated that he has several times cut the cervical sympathetic and believes that the operation has a future. Kocher has also secured several permanent successes with it.

Treatment of Hemoptysis.—The *Journal de Méd. de Paris*, of October 25, describes Capitan's method of managing hemoptysis as follows: Immobilise the patient, with his head elevated. Apply sinapisms to the lower members. Give him pieces of ice to suck, and if possible make him swallow a spoonful of ether in a little sweetened water. Then inject immediately a Pravaz syringe of the following solution: Yvon ergotin 5 grams; morphin hydrochlor. 0.04 gram; antipyrin 1.50 grams; spartein sulphate 0.20 gram; atropin sulphate 002 gram; aqua dest. q. s. for a total vol. of 10 c.c. F. s. a. solution. The injection should be made deep and preferably in a muscle. It can be repeated from half hour to half hour, or every fifteen minutes, if the danger is urgent, but not more than four or five syringes full in all If the patient can swallow, give every half hour a tablespoon of the potion Bongean ergotin 3 grams, gallic acid 0 50 gram syrup of turpentine 120 grs F s a potion Cupping is also useful if it can be managed, applied in several places, and also bags of hot water or bags of ice applied locally or at a distance

Potassium Nitrate in the Treatment of Burns—The *Lancet* has an annotation stating that Dr Poggi has found that the addition of a few teaspoonfuls of potassium nitrate to a bath, into which the burnt part is plunged, will quickly cause cessation of the pain After a time the water becomes heated and the pain returns, but again subsides on the addition of another quantity of salt. Professor Vergely has obtained good results by covering the burnt parts with a paste prepared by mixing calcined magnesia with a certain quantity of water and allowing it to dry on the skin, renewing it as soon as it becomes detached Under this treatment it is said that the wounds heal well and pain is prevented

Organic Alterations in Chloroform Narcosis—The discussion of chloroform *versus* ether, has entered upon a new phase of late, with the histologic study of the subject Ajello of Palermo adds an important contribution by an article published in the *Gazetta d Osp e d Clin* of October 25, describing the results of his clinical observations and investigations, as well as of an extensive series of experiments Chloroform determines acute parenchymatous alterations of varying intensity and degree, of an inflammatory and degenerative nature The parts most affected are the kidneys, the liver, the heart, the striated muscles, the spleen, the blood and the vascular system These alterations are not characteristic of chloroform alone, but are also produced by any intoxication of the system, generally as a consequence of some infective disease The degree and intensity of the alterations depend directly upon the amount of chloroform administered, and the length of the narcosis They usually terminate by *restitutio ad integrum* of the organs affected, but they are capable of producing death, principally by uremic intoxication Occasionally they continue a course of involution, and become chronic

Significance of Suppurations of the Ear—The growing importance ascribed to suppurations of the middle ear at the recent surgical congresses, especially the Paris congress, recalls the career of appendicitis The danger of serious cerebral complications is now so generally recognized that the hitherto insignificant otorrhea is now receiving an unprecedented amount of attention Surgeons no longer allow pus to remain in the mastoid cells, and we know that there is always pus in the mastoid when it is *en evidence* in the middle ear, with only a thin bony plate separating it from the meninges, the brain, etc , any more than they allow it to remain in a tibia or humerus The *only question now is early diagnosis of the* possible cerebral complications, and the best methods of procedure Broca trephines the apophysis and tympanum, opening the temporal fossa above the roof of the aditus ad antrum, to drain a cerebral abscess He finds that all the complications vanish simultaneously with this treatment, which is an urgent argument in favor of the mastoid route Schwartz recently sutured the lateral sinus in a traumatic case, but this would scarcely be prudent in an infective mastoiditis —*Prov Méd* , October 31

Substitution of Eucain for Cocain—Legueu has found that six centigrams of cocain will kill a guinea pig in three quarters of an hour, while eight centigrams of eucain require twice this length of time to produce death in another animal of the same size, showing the less toxic properties of the latter It is fully equal if not superior to cocain in producing anesthesia, and for these reasons he has adopted it for local anesthesia in preference to cocain, especially for the urinary apparatus He uses a hundredth solution and never injects into the urethra or under the skin more than five to six centigrams, following in all respects Reclus's advice for the administration of cocain (see the JOURNAL, Nov 7, page 1012) In cystoscopy he uses a five hundredth solution, of which he injects 160 to 200 grams into the bladder He adds that eucain has a strongly congestive effect, which contra indicates its use in cases where there is much bleeding —*Bulletin Médical*, November 18

Parenchymatous Injections of Carbolic Acid in Affections of the Tonsils—Kramer reports most favorably on the results of treating the chronic relapses of tonsillary affections, which render life comparatively a burden to the patients with their frequency and the gravity of the accompanying disturbances, with four to six injections of about ½ c cm of 2 to 3 per cent carbolic solution, in the course of two or three weeks The injections were made with a Pravaz syringe at different points in the pillars of the fauces, after cocainization Fifteen patients have now been freed of their tonsillary troubles for two and one half years, and numerous others for a shorter period There were no inconveniences from its use and the unfailing success of the treatment in preventing relapses in so many cases can not be a mere coincidence —*Cbl f Clin* , November 21

Analgen in Infantile Therapeutics—Moncorvo of Rio Janeiro has been testing the effects of analgen (ortho ethoxy anamonobenzoylamidoquinolin), in fifty nine cases of infantile diseases, among them thirty three cases of malaria No inconveniences followed its use in any case, even in doses much higher than those heretofore attempted (25 centigrams to 3 grams in twenty-four hours), and improvement occurred in all, merely varying in its promptness The fever subsided in the malarial cases, especially, with all the nervous symptoms Its insipid taste renders it easy to administer, and in cases where for any reason it is impossible to give quinin, analgen promises to take its place very effectively The soothing and antipyretic effect in acute and subacute tuberculosis was also marked, and the same favorable results were attained in acute lymphangitis and arthro synovitis, while a case of Sydenham's chorea was promptly cured, and epilepsy much relieved It also relieved the pain more or less in the neuralgia of Pott's disease, coxo tuberculosis, etc Full details of the treatment and cases are given in the *Bulletin* of the Paris Academy of Medicine of November 10

Surgical Intervention in Peritonitis accompanying Typhoid Fever—Dieulafoy presented an important paper on this subject at the meeting of the Paris Acad de Méd , October 27, in which he stated that the current of modern progress is sweeping into the domain of surgery what used to be considered exclusively the patrimony of medicine Especially is this true of peritonitis, even to the peritoneal complications of typhoid fever He described the peritonitis from perforation which appears during the course or relapses of typhoid fever The perforation may be in the ileum, the cecum, the appendix or the colon It is not restricted to severe forms of the disease, but appears as often, perhaps, in the mild cases The one unmistakable and most important symptom is the abrupt fall of temperature, descending to hypothermia This striking drop of the temperature occurs also with sudden intestinal hemorrhage, but in this case it rises again as high or higher than before, while in case of perforation in remains low, but without chills The prognosis of peritonitis from perforation is extremely grave, but cases are known in which it was controlled by the prompt formation of adherences, which closed the perforation in time There is also the para typhoid appendicitis, which usually appears during the latter period or convalescence of typhoid fever It is generally accompanied by a rise of temperature, which distinguishes it from the perforation peritonitis and proceeds in its evolution like an ordinary appendicitis The infective process may be limited to a singular appendicular attack, without any peritonitis, or it may, with or without secondary perforation of the appendix lead to all the complications of appendicitis. Encysted peritonitis, generalized peritonitis, abscesses in the liver or elsewhere, etc. He adds that what used to be called peritonitis by propagation (passage of the bacilli through the walls of the intestine without perforation), does not exist. Not until a closed cavity is formed by an ileus, volvulus or closing of the appendix by a calculus or something of the kind, do the bacilli acquire sufficient virulence to penetrate the intestinal walls. (Dieulafoy is the advocate of the closed cavity theory of appendicitis.) The medical treatment of these two forms of peritonitis is to attempt to keep the intestines perfectly quiet, so as to modify or prevent the passage of septic matters into the peritoneum, and facilitate the formation of adherences. No food is allowed, nor drink, the patient is not permitted even to swallow the water that dissolves from the few pieces of ice given him to hold in his mouth. Two centigrams of opium extract are administered every hour, with injections of morphin if necessary, and bags of ice are applied to the abdomen, suspended so as to relieve him of their weight, or else the abdomen is covered with refrigerating compresses congealed by evaporation of methyl chlorid. But these medical measures are often impotent, and the question of surgical intervention then arises. The patient is in such a poor condition to undergo an operation, the intestines are in such a bad state, that intervention seems audacious to say the least. In the para typhoid appendicitis the conditions are more favorable, as the operator has no ulcerous intestine to suture, only the appendix. In perforated peritonitis however the diagnosis is difficult, but an operation offers some chances of saving the patient if the proper moment for intervention can be determined. He described a case of the kind in which his laparotomy had been followed by death in a short while, but the necropsy showed successful cicatrization of the suture of the perforation, and that the fatal result was due to a second and third later perforation. He concludes therefore that in spite of the ulcerated condition of the intestines the suture heals and surgical intervention is thus justified.

Lutaud's Treatment of Obesity in Women.—Women require a different kind of treatment, on account of possible peri-uterine adherences, from what is indicated for men. Lutaud's course is fourfold: Medical, dietetic, local and hygienic, all applied simultaneously, and it has proved very successful. He finds that scammony is the purgative best adapted to these cases. It causes a rapid decrease in the size of the stomach and abdomen and is very active, taking effect in four or five hours, so the patient should be notified. His formula is: Scammony one gram, oil of anise one drop, to be made into a powder and taken at night, toward midnight. Repeat the dose every two or three days, or less frequently as may be indicated. In the morning immediately before eating, he orders a wineglass of some purgative water, such as Carabana or Janos, or a teaspoon of the following powder in a little water: Powd. senna leaves, cream of tartar and sublimed sulphur, āā 3 grams, powd. illicium 2 grams, sugar 40 grams. The nights when the scammony is omitted he orders a tablespoon of the following: Potassium iodid 10 grams, extract of fucus vesiculosus 5 grams, syrup of orange peel 190 grams. In some cases he substitutes 20 centigrams of opium extract for the fucus, as the effect of the opium on the system allows the patient to do with less food without inconvenience. He adds that the trials of Baumann's thyroiodin enable us to recommend it in cases of obesity. The dose varies from 1 to 4 grams a day, according to the tolerance of the patient. The tablets are the easiest administered. He has adapted the dietetic part of his treatment to conform to feminine tastes and habits, simplifying it as much as possible, and only insisting that women should eat often, four or even five times a day, avoid heavy meals and give up altogether the use of butter and effervescing beverages. For breakfast, 7 to 9, he advises about 50 grams of meat, toast or rolls at discretion, and a cup of coffee without milk, no butter. For lunch, between 11 and 1, meat at discretion, an egg, cheese, 50 grams of toast or rolls, and a cup of tea with or without milk. At 5 o'clock, tea or a glass of wine, with a cracker. Dinner between 7 and 8, no soup, but fish and meat at discretion, salad, 50 grams of vegetables, cheese, 50 grams of toast or rolls, a fruit and a glass of pure Bordeaux or Burgundy. Supper between 11 to 1 A.M., a glass of Madeira, a slice of cold meat and a cracker, this meal is optional. The local part of the treatment is very important when there are uterine or peri-uterine complications. It consists of scientific massage of the abdominal and lumbar regions, and especially of the uterus and adnexa, when they are adherent to neighboring organs. It cannot be applied if there is inflammation, until it has partially or entirely subsided. It should be kept up perseveringly for a long while, especially in the case of women who are unable or unwilling to walk or take physical exercise. Unfortunately, exercise, the most valuable part of the treatment, is the most difficult to enforce. He has a gymnastic apparatus (Swedish) installed in the apartment, or better still, sends the patient to a special establishment, where she is directed and stimulated. He orders the bicycle whenever practicable, and has seen great benefit derived when women have been enticed from their oriental torpor by its use. The course is completed by the Turkish bath, followed by the douche and massage, which he always finds acceptable to the patient, unless there are special contraindications. He adds that a stay at a sanitarium or "cure" is excellent, as it removes the patient from her usual environment, and favors the application of the entire course of treatment. He advises the alkaline sulphate waters.—*Jour. de Méd. de Paris*, November 1.

SOCIETY PROCEEDINGS

Chicago Pathological Society

Annual Meeting, May 11, 1896.

The President, Dr. Weller Van Hook, in the Chair.

THE SURGICAL TREATMENT OF TUBAL PREGNANCY WITH REPORT OF A CASE.

A paper with the above title was read by Dr. Louis J. Pritzker. The case was that of a woman aged 28, married, who gave birth to a child two years before coming under the author's observation. Her previous history was otherwise unimportant. She menstruated last, July 10, 1895. About six weeks later she began feeling pain in the left iliac region, on August 23 she suddenly went into collapse. Dr. T. A. Davis made a diagnosis of ruptured tubal pregnancy and sent her to the Cook County Hospital, where the author operated on August 24, at 5 P.M. There was found an interperitoneal hemorrhage which seemed to come from the left tube and which was controlled by ligation of the tube close to the uterus. The left adnexa were removed, the right were healthy and were not disturbed. The rent in the tube was situated in superior wall at the middle third, and here there was a small placental mass. No corpus luteum was found in the ovary. There was a small ovum found in the tube, appearing from four to six weeks in age. An uninterrupted recovery occurred.

Dr. Jas. Dorland presented a specimen of extra uterine pregnancy which he had removed from a woman 20 years old, by laparotomy. Six weeks after her last menstruation she began to flow very much, and a small swelling the size of an orange was found on the right side of the uterus. The uterus was curetted and an expectant treatment was pursued and the swelling grew smaller, but suddenly she collapsed, the swelling became boggy and increased in size. Laparotomy was made, intraperitoneal hemorrhage found, and a sac containing a fetus removed. The patient is progressing nicely six days after the operation.

Dr. Byron Robinson—The thing of interest to me is that I have never seen nor heard of a case of extra uterine pregnancy in the lower animals. I notice that Bland Sutton mentions the same fact.

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It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second class mail matter not having street address, would be placed in the general delivery to await call

SATURDAY, DECEMBER 12, 1896

THE PHILADELPHIA MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The fact that the AMERICAN MEDICAL ASSOCIATION will hold its next annual meeting in Philadelphia, thereby celebrating the semicentennial of its existence, is of interest not only to those members of the profession who already belong to the ASSOCIATION, but to those, and we believe there are many, who are desirous of entering its ranks and thereby aid in maintaining the professional standard which has so long and so successfully waved over the medical profession of this country Fifty years ago next spring under the presidency of Dr JONATHAN KNIGHT of Connecticut, the first great medical convention of the United States met in Philadelphia and appointed as its secretary, Dr ALFRED STILLE of that city It also appointed as chairman of the committee on scientific papers Dr OLIVER WENDELL HOLMES, and under the guidance of these men, well known in medicine and literature, the ASSOCIATION gained a vitality which it has never lost It is interesting to note that at the Philadelphia meeting both Dr NATHAN SMITH DAVIS, the organizer, and Dr ALFRED STILLE, the secretary, of fifty years ago, will probably be present, as both gentlemen, notwithstanding their advanced years, are both in unusually good health Aside, therefore, from the interest which centers around the semicentennial gathering, the members who attend this meeting will have an opportunity of meeting these standard-bearers and of linking together the past and the present in American medicine This interest is increased when it is remembered that during the sixty years in which Dr ALFRED STILLE has been a Doctor of Medicine he has seen more wonderful changes take place in the character of medical science than has ever been seen in a corresponding period of sixty years before our time It seems curious that sixty years ago, at the time when he graduated in medicine, no true distinction had yet been made between typhus and typhoid fever and that the pathology of this disease, which is unfortunately so prevalent, remained an almost unknown quantity for the medical mind Again, we remember that STILLÉ was a student in Paris about, or very shortly after, the time when LOUIS was putting his imprint upon his students the American investigators, who afterward aided him so materially in separating these two diseases, and that in the wards of large hospitals in Philadelphia STILLE carried out investigations and wrote papers in connection with this and other infectious diseases which have long since become classics in the literature of medicine

Again, the fact that Philadelphia was for so many years the medical center of the United States in more senses than one, surrounds this meeting with unusual importance Throughout the entire century not only have her medical schools turned out men of extraordinary success and ability, but her graduates have placed American medicine in the very front rank It was from this city that the first medical diploma was granted in America by what is now the Medical Department of the University of Pennsylvania, and it was from the Jefferson College that MARION SIMS, THOMAS ADDIS EMMET, BATTEY and GOODELL graduated and then put their stamp for all time upon gynecology Jefferson also graduated SAMUEL D GROSS, than whom no American has been more highly honored by foreign bodies of learning

Not far from the place of meeting stands the Pennsylvania Hospital, the oldest institution of its kind in the United States, which possesses not only a quaint interest from its history but much scientific interest from the manner in which it has kept abreast of all that pertains to advanced medicine and surgery, and in the Philadelphia Hospital, with its 1,500 beds, may be found almost every type of disease which is met with in the temperate zone In addition to these hospitals there are many other large hospitals within easy reach of the place of meeting, in all of which the visitors to the ASSOCIATION meeting will find members of the staff constantly on duty for the purpose of entertaining them and exhibiting the interesting and valuable cases, which can only be found gathered together in a great metropolis

Finally, it seems to us that the occasion of this semicentennial meeting is one which should be embraced by each and every member of the ASSOCIATION to do missionary work among his fellow-practitioners, with the object of having them add their names to the membership roll, a roll which is a highly honorable one and which must through the very nature of things materially preserve the honor and standing not only of the profession as a whole, but of each individual practitioner We append a statement from the permanent Secretary showing the places of meeting from the beginning

The places of meeting are as follow

Convention met in New York, May 5, 1846, in Philadelphia, May, 1847, and resolved itself into the AMERICAN MEDICAL ASSOCIATION The ASSOCIATION met May, 1848, in Baltimore, in Boston, May, 1849, Cincinnati, May, 1850, Charleston, in May 1851, Richmond, Va, May, 1852, New York, May, 1853, St Louis, Mo, May, 1854, Philadelphia, May, 1855, Detroit, Mich, May, 1856, Nashville, May, 1857, Washington, May, 1858, Louisville, Ky, May, 1859, New Haven, Conn, June, 1860, Chicago, June, 1863, New York, June, 1864, Boston, June, 1865, Baltimore, May, 1866, Cincinnati, May, 1867, Washington, May, 1868, New Orleans, May, 1869, Washington, May, 1870, San Francisco, May, 1871, Philadelphia, May, 1872, St Louis, May, 1873, Detroit, June, 1874, Louisville, May, 1875, Philadelphia, June, 1876, Chicago, June, 1877, Buffalo, June, 1878, Atlanta, May, 1879, New York, June, 1880, Richmond, Va, May, 1881, St Paul, Minn, June, 1882, Cleveland, June, 1883, Washington, May, 1884, New Orleans, April, 1885, St Louis, May, 1886, Chicago June, 1887, Cincinnati, May, 1888, Newport, R I, June, 1889, Nashville, May, 1890, Washington, May, 1891, Detroit, June, 1892, Milwaukee, June, 1893, San Francisco, June, 1894, Baltimore, May, 1895, Atlanta, May 1896 W B ATKINSON, Secretary

THE DEATH OF FALSTAFF

The editorial remarks in the *Chicago Sunday Tribune*, December 6, and the *Chicago Chronicle* of the same date concerning the Shakespearean account of the death of FALSTAFF, and the various suggestions for emendations of the text therein quoted prompt us to remark that the description of the death scene is clearly taken from HIPPOCRATES' "Prognostics," and that the "facies Hippocratica" is well described ADAMS' translation of the passage is "A sharp nose, hollow eyes, collapsed temples, the ears cold, contracted and their lobes turned out, the skin about the forehead being rough, distended and parched," (Prognostics, ¶ 2), and again "When the hands are waved before the face, hunting through empty space as if gathering bits of straw, picking the nap from the coverlet, or tearing the chaff from the wall, all such symptoms are bad and deadly," *ibid*, ¶ 4 "It is a bad symptom when the head, hands and feet are cold," *ibid*, ¶ 9 And again in "Epidemics," Book 1, ¶ 2 "Most persons delirious when near death"

The babbling of FALSTAFF was simply an evidence of that delirium, which when taken in connection with the other symptoms betokened approaching death The Shakespearean description is therefore correct, whether viewed from a realistic standpoint or from that of classic writings

Celsus on Medicine, Book II, ¶ VI, says "Ad ultima vero jam ventum esse testantur, nares acutæ collapsa tempora, oculi concavi, frigidæ languidæque aures et imis partibus leniter versæ, cutis circa frontem dura et intenta, color aut niger aut perpallidus, multoque magis, si ita hæc sunt, ut neque vigilia præcesserit, nec ventris resolutio, neque inedia Ex quibus causis interdum hæc species oritur, sed uno die finitur, itaque diutius durans, mortis index est"

(To witness that the extreme has come these attest: sharp nose, sunken temples, hollow eyes, ears cold, languid and gently turned in the lowest parts, the skin about the forehead hard and stretched, the color either black or very pale, much more so if these signs have come without preceding wakefulness, purging or fasting From which causes these appearances sometimes arise—but they vanish in one day, so that if it continue longer it is an index of death)

Lucretius (Book VI) "*De Rerum Natura*," gives the same signs, as follow

"A pedibusque minutatim succedere frigus
Non dubitabat item ad supremum denique tempus,
Compressæ nares, nasi primoris acumen
Tenue, cavati oculi, cava tempora, frigida pellis,
Duraque inhorrebat rictum, frons tenta meabat,
Nec nimio rigida post strati morte jacebant"
Etc, etc

(The cold glides insensibly from the feet to the other parts of the body, but when the patient makes his last effort, the nostrils are compressed, the *nose becomes pointed*, the eyes sunken, the temples hollow, the skin cold and hard, the grinning mouth begins to quiver, the forehead stretches and is at last penetrated by the cold of death)

SHAKESPEARE'S description is as follows

"'A parted e'en at the turning 'o the tide, for after I saw him fumble with the sheet, and play with flowers, and smile upon his fingers' ends, I knew there was but one way, for his nose was as sharp as a pen, and 'a babbled of green fields How now, Sir JOHN! quoth I, what, man, be of good cheer So 'a cried out—GOD, GOD, GOD! three or four times, now I, to comfort him, bid 'a should not think of GOD, I hoped there was no need to trouble himself with any such thoughts yet So 'a bade me lay more clothes upon his feet, I put my hand into the bed, and felt them, and they were as cold as any stone, then I felt to his knees, and so upward and upward, and all was as cold as any stone"

SHAKESPEARE, with that perfect acquaintance with classic models that characterizes his technical work, simply described a death scene and when FALSTAFF is spoken of as babbling, he gave a sign of delirium It was quite immaterial whether the babbling were intelligible or not, the wild and ever changing fancies that come with the deepening delirium of death, need no articulate language, and indeed whatever be said at such times, the language finally passes into incoherent and meaningless sound "The fumbling with the sheets," and playing with imaginary flowers, is another sign of delirium mentioned, as already quoted, by **Hippocrates** "When the hands are waved before the face," etc, then such sign is 'bad and deadly" In the face of such facts, the contentions of Mr **Theobald** and Mr **Locke Richardson** whether the text should properly read ' green fells," "green fields" or "green baize" are calculated to raise a smile

AIR EMBOLISM IN CONNECTION WITH PLACENTA PRÆVIA

Death may occur in labor or shortly afterward from a variety of causes, such as heart failure, pulmonary embolism, air-embolism, uterine or other hemorrhage, rupture of the uterus, of the heart, of other important viscus or of an aneurysm or of an abscess, etc The entrance of air into the uterine veins during or following labor may take place spontaneously, though often it has followed injections into the uterus and other manipulations about the birth canal In a small number of cases a similar event may follow the formation of gas in the uterine cavity as a result of decomposition The accident is almost invariably fatal, so that every precaution should be observed, so far as possible, against its taking place

The occurrence of air embolism in connection with placenta prævia has not hitherto been frequently observed, although a small number of cases have been recorded within recent years **Kramer** (*Zeitschrift fur Geburtshulfe und Gynäkologie*, B xiv, H 2) reported two cases in 1875, **Krukenberg** (*Centralblatt fur Gynäkologie*, 1892, p 169) one in 1892, and **Heuck** (*Zeitschrift fur Geburtshulfe und Gynakologie*, 1894, p 140) one in 1894 To this number **Lesse** (*Zeitschrift fur Geburtshulfe und Gynakologie*, B xxxv, H 2, p 184) adds a fourth, which occurred in a quartipara, of whose previous labors the first had terminated spontaneously, the second with the aid of forceps and the third in version Repeated uterine hemorrhage in the ninth month of pregnancy led to the discovery of placenta prævia, with the fetus occupying a partially transverse position The hemorrhage was controlled by means of tampons and in a short while feeble labor-pains set in and these were followed by renewed bleeding

As the labor progressed slowly, in order to prevent a repetition of the hemorrhage and likewise to expedite parturition version was undertaken To overcome muscular resistance gentle chloroform-narcosis was induced The membranes were ruptured, two fingers introduced into the uterus and a foot brought down into the cervix The pulse at once disappeared and respiration halted for a moment, while the patient became cyanotic, but did not lose consciousness Ether was injected subcutaneously, infusion of saline solution practised and artificial respiration instituted, but despite most active efforts continued for five hours the fetal heart sounds were lost and the patient finally succumbed Upon opening the right auricle under water after death a considerable number of large and small bubbles escaped and section of the lungs permitted the escape of bloody foam, while blood and bubbles could be expressed from a number of small pulmonary arteries Anemia and chloroform-intoxication were excluded as causes of death and post-mortem decomposition as the factor responsible for the presence of gas in the heart and pulmonary vessels, and the conclusion was reached from a careful weighing of the evidence that death had resulted from the entrance into a uterine vein, at the site where the placenta had become prematurely detached, of air admitted into the uterus through the intermediation of the manipulations required to perform version

THE DIAGNOSIS OF TWIN PREGNANCY

While the recognition of multiple pregnancy is at times comparatively easy it is at other times extremely difficult, if at all possible with certainty It will be appreciated that in a given case the diagnosis may be of the utmost importance, as upon its correctness will depend the outcome of the pregnancy, the safe delivery of the product of conception and perhaps also the life of the mother In a failure to distinguish a duplication of the fetal members the diagnosis may remain undeterminable until labor has begun or even progressed to quite an advanced stage **Pajot** contended that the obstetrician could be certain of the existence of twins only when after the birth of one fetus another was found yet in the uterus

The existence of twin pregnancy is rendered probable by unusual and irregular enlargement of the abdomen, by the occurrence of fetal movements in different parts of the abdomen and with increased activity and by an exaggeration of the usual concomitants and disturbances of pregnancy The diagnosis is assured if pulsation of the fetal heart can be heard with maximum intensity in two different situations and without synchronism, as was first pointed out by **Kergaradec** In the determination care must be exercised to exclude the mother's hearts sounds as well as those of the observer To further eliminate the possibility of error **Ahlfeld** has proposed simultaneous auscultation of the abdomen by two different observers, and in a recent communication (*Zeitschrift für Geburtshulfe und Gynäkologie*, B xxv, H 2, p 180) he details experiences in which the employment of this diagnostic adjunct proved of the utmost service

A woman 35 years old, with a contracted pelvis, who had previously been delivered unsuccessfully on four occasions, came under observation at the end of the eighth month of her fifth pregnancy, for the purpose of having premature labor induced to secure delivery of a living child On examination the pelvis was found to be flattened, probably as a result of rachitis, with a diagonal conjugate of 9 2 cm and a true conjugate of 7 5 cm The appearances altogether suggested a twin pregnancy and the exigencies of the case made it essential that a positive diagnosis be made in good time, for in the existence of that condition premature labor was not called for, while in its absence the induction of labor prematurely was necessary to effect the delivery of a living child, as well as for the safety of the mother Simultaneous auscultation of both sides of the abdomen by two persons on several occasions showed differences of from one to fifteen beats per minute In accordance with this determination pregnancy was permitted to continue, labor setting in spontaneously two weeks earlier than had been expected and terminating in the successful delivery of a boy and a girl weighing 2210 and 2010 grams respectively

It is necessary in thus employing auscultation in the diagnosis of twin pregnancy that the heart count be made simultaneously and for at least a whole minute at a time In private practice, when it is not convenient for two persons to make comparative observations, the physician may practise auscultation of the two sides of the abdomen in rapid succession Under these circumstances it is important for the patient to make no change in her position during the examination, as any such movement may have a pronounced effect upon the heart-beat of the fetus and give rise to apparent differences that may occasion deception The result of such observations may be accepted as conclusive only if the differences in the beats of the two sides are positive and pronounced, otherwise it will be necessary to resort to comparative simultaneous observations by different persons

THE LOCAL ACTION OF THE X RAYS

Ever since the discovery and the first practical application of the Roentgen rays there have been, as it was anticipated there would be, numerous claims of special effects on organisms and on various forms of life Some of these have already been disproven or discredited, such for example as their alleged action on bacterial life Whatever there may be in this, it has not as yet won any strong support in scientific quarters, and their value as a therapeutic agent, anticipated by some, is practically *nil* thus far From various quarters, however, there have appeared and are constantly appearing reports of certain special inconvenient symptoms following exposure to these rays Some of these, such as the subjective sensations experienced by some patients, may be practically accounted for by the existing nervous and mental condition of the patient in some cases At least this is a possible way of explaining some of these symptoms whether it will be fully satisfactory in all may perhaps be questioned Other phenomena, however, like the dermatitis that has been observed, require another explanation and their essential connection with the X rays is a matter that is yet debatable The fact that they fail in many who from long exposure might be expected to show them, proves nothing positively, the question of idiosyncracy has to be taken into account There are many who resist other better known disturbing agencies and there may well be some who are immune to the deleterious influences of these rays Perhaps we may even assume that this special kind of vulnerability is the misfortune of the few, and that most persons are immune That there is a reality in these phenomena is proven by many observations, one of the most notable of which is reported by Dr E E KING in the *Canadian Practitioner* for November The patient in this case was an operator and exhibitor of the X rays and was more or less exposed to them for many hours a day for a number of weeks The effects in this particular case were dermatitis and other alterations of the skin, destruction of hair and nails, and conjunctivitis In this case, as in the case reported by Dr G C SKINNER in the JOURNAL November 14, many of the symptoms corresponded with those of a severe sunburn but others are rather peculiar, and it is a little remarkable, considering the penetrative powers of the rays, that the history gives no account of any involvement of the other portions of the integument and its appendages

It is beyond question, apparently, that exposure to the X rays, if sufficiently prolonged, is sometimes accompanied with the production of lesions of the skin and the dermal growths That ordinary or moderate exposure has no such effects in the average individual, is needless to argue, it is a self-evident fact Whether these effects are due to some electric action, to ozone as suggested by TESLA, or to the direct action of these rays themselves, however, is another question and one that is yet to be solved There is certainly an open field here for investigation

THE RUSH MONUMENT

Argument and entreaty, eloquence and rhetoric have been employed by the Chairman of the Rush Monument Committee of the ASSOCIATION, in his appeals to the profession and reports to the ASSOCIATION, on the subject of the Rush Monument, a memorial stone as yet *in futuro* The sum so far raised is still entirely inadequate to build anything at all worthy of the ASSOCIATION In the meantime the monument to SAMUEL HAHNEMANN is nearly finished as we learn from the following paragraph which appeared in the *Chicago Tribune* of Sunday, December 6

> A large bronze memorial statue of SAMUEL HAHNEMANN, founder of homeopathy, which with its pedestal is to cost $75,000, will soon be erected in Washington by the homeopathic physicians of the United States CHARLES N NIEHAUS of New York is the architect

Surely there is patriotism, public spirit and generosity enough in the American medical profession to build this monument! But the results are too slow

The Treasurer of the Committee is Dr George H Rohl of Sykesville, Md, and he is very prompt to acknowledge a remittance

There is an old story told of a traveling salesman who was selling engravings of Washington On approaching a rich banker he solicited his subscription without result The magnate said "You wish to sell to me, an ardent lover of my country, a picture of George Washington? Why, sir," and at this point he placed his hand over his heart, "I have him always in my heart" "If that is really the case," said the commercial traveler, "all I have to say is, that you have Washington in a mighty tight place"

Have the medical profession such an esteem for the virtues of Benjamin Rush that they have him so perpetually in mind that he needs no other memorial? Let the world know what the profession can accomplish when it really tries

Let the Rush Monument be built

CORRESPONDENCE

"The Poisoning of a People"

LaGrange, Texas, November 1896

To the Editor —In your editorial "The Poisoning of a People," I find sentiments expressed which, although one comes across similar expressions of late in the secular press, are never the less in my humble judgment not quite up to the high standard of the Journal, besides do such expressed sentiments remind me of the gloomiest days in my recollection, of the days of my boyhood, when the native born citizen looked with the utmost contempt on his foreign born neighbor and when in his desire to curtail the rights and privileges of these foreign born people, he would resort to the most stringent and desperate measures and would even arm himself and fight battles in the streets of our cities—*e g*, St Louis, Mo, to defend his so called prerogative rights against imaginary encroachments of the despised foreigner

The views expressed in the Journal and the sentiment of times gone by, only differ in the remedies recommended with which to combat the evil, and the difference in the nationality of the offensive intruders, they having been "ignorant Germans" during the "fiftieth" while at present they are filthy Italians, Slavs or Huns

At the time of the revolution, the American people consisted of but a few millions of people In the course of a little over a century we have become a nation of eighty millions and we boast of being one of the, if not *the* most civilized and enlightened people on the face of the globe

What then were the influences brought to bear to make us in such short space of time of such huge proportions in every respect? The answer inevitably must be, that beside our free institutions and immense resources the main factor has been The extended, wide open arms of this young nation, ready to receive and to greet the poor, the oppressed and the downtrodden people of other countries and especially those of the old world, of worn out monarchical Europe Are we not ourselves, everyone of us, the descendants of such foreigners, so popularly called the "scum of nations," who have been drawn hither in advance of us, by the invitation of a free, self sacrificing people and the allurements of our productive virgin soil which was, and is still but awaiting the till and toil of the breadwinners of the world?

The so called Anglo Saxon race, as represented in the United States, has manifested such an enormous power of assimilation as was never before shown by any other people The Christian, the Jew, the Buddhist and Mohammedan, the Caucasian, Mongolian and even the Æthiopian have commingled Europe has since the establishment of this government, and previous to this, dumped the inmates of its poorhouses, asylums and even its prisons onto our soil, but few of us are able to date back our ancestry to the cream of this "influx" According to your expressed views, instead of the American nation rivaling with other nations in culture and civilization we, the descendants of the emigrated "scum of the world" should be a nation of degenerates, a mongrel race having no power of resistance whatever, and whom but the slightest upheaval would sweep from the face of the earth, while we were fortified by a strife among ourselves, huge in proportions, ideal in inception and humane in its consequences, showing this nation to consist of an "admixture" of people who, although not as yet fully matured and fixed, but which must have most excellent qualities and which ultimately promises to become the equal, if not the superior of any people that live or ever lived Respectfully, F A Schmitt, M D

Administration of Antitoxin

Fairfield, Iowa, Dec 5, 1896

To the Editor —In view of the occasional fatal effects of diphtheria antitoxin and the rapidity with which death occurs in these cases, I would suggest the advisability of dividing the administration of the desired dose into several stages at intervals of several minutes between the stages, giving but a fraction of the entire dose at each stage

Tentatively I propose one fourth, or less, of the intended dose at each stage of the injection, letting an interval of five or preferably ten minutes elapse between the stages of the injection I do not conceive it would be desirable to withdraw the syringe and re introduce it when interstages are not longer than ten minutes, but the needle can remain introduced until the injection of the entire dose is effected

In case dying from the antitoxin, fatal collapse has usually resulted within five minutes from the time of completing the injection As most operators occupy five minutes in making an injection of 10 c c of standard serum it would appear that ten minutes are required to allow the full depressing effect of the injection to be manifested, I would conclude that ten minutes is most reasonably the length of time which should be allowed to elapse between the stages of the injection of a full dose

It is not probable that the antitoxin given in this manner would be any less effectual in enabling the cells to resist the toxins of diphtheria than when the entire dose is administered at a single stage The plan certainly enables the operator to avoid giving an overdose in patients who are peculiarly susceptible to its toxication, because he can prolong the intervals between the stages of its administration or suspend it altogether upon the occurrence of alarming symptoms

While only one death results from many thousand injections it is desirable to avoid even that one death and to avoid arousing local prejudices against a most valuable remedy

J V Bean, M D

Harvey Medical College

Chicago, Dec 7, 1896

To the Editor —In the last issue of the Journal but one, there is published a defense by Byron Robinson of the Harvey Medical College, which has been [illegible] nate [illegible] a writer, "A Diploma Mill" According to [illegible] lege requ four courses, all of which are given in the evening between seven and ten, that is, not more than three hours out of the twenty four In the reputable medical colleges students usually spend from eight to nine hours at the college daily, besides three or four hours in close study in their rooms, therefore, according to Dr Robinson's showing this institution only requires about one quarter, certainly not more than one third the amount of work demanded by the reputable colleges, and it still appears to us that he has not established his case against those who call the institution, "A Diploma Mill" It is not probable that a man who has given his whole day to his trade will be able to put in three solid hours work in the evening in study, or if it be conceded that he can do this it is evident that this is very much less time than ought to be required It is beyond our comprehension how reputable medical men can lend themselves to such an enterprise If they wish to establish a night school in good faith they should lengthen their course to twelve years, which would give their students about the same amount of time now required in reputable colleges

INQUIRER

"Aphasia of the Hand"

CORTLAND, N Y, Dec 1, 1896

To the Editor —In reference to your very interesting editorial in the last number of the JOURNAL on "Aphasia of the Hand" will you allow me to call your attention to the opinion of Max Knies, as to the location of the lesion You will find it at the bottom of page 92 of the German edition of "Die Beziehungen des Sehorgans und seiner Erkrankungen zu den ubrigen Krankheiten des Korpers und seiner Organe"

It is, as you will notice, that for writing, the important special center for the right hand lies about in the middle of the posterior central convolution

Yours sincerely, F W HIGGINS, M D

"God and the Doctor we Alike Adore"

PHILADELPHIA, Dec 2, 1896

To the Editor —In the JOURNAL of November 28, a correspondent who signs himself R M W, inquires as to the authorship of the following lines

"God and the doctor we alike adore,
But only when in trouble, not before
The trouble o'er, both are alike requited
God is forgotten, and the doctor slighted"

I have been familiar with a similar stanza for several years and am inclined to think that the lines are incorrectly quoted by R M W

In a "Code of Medical Ethics" by Jukes de Styrap, M K Q C P, etc London, 1886, he will find the following

"God and the doctor we alike adore
When on the brink of danger not before,
The danger past, both are alike requited
God is forgotten and the doctor slighted!"

This does not answer your correspondent's question but it may perhaps give him a clew to its solution

Yours truly, FREDERICK P HENRY, M D

NORTH EAST, PA, Dec 6, 1896

To the Editor —The Alma Mater of Dr Burnside Foster of St Paul, ought to take him across her maternal knee for translating the beautiful Latin of (??) Euricius Cordus as an answer to the query of R M W, of Brooklyn *in re* the authorship of the lines "God and the doctor" et sequens The proper although liberal translation of this quotation from E Cordus is I think as follows

"Three faces wears the doctor,
When first sought an angel's,
And a God's, the cure half wrought
But when the cure complete,
He seeks his fee,
The devil is less terrible than he'

The next time B F essays a translation I trust he will honor his Alma Mater better than he has with this "his maiden effort"

By the way I have often wished some enterprising firm would embellish this translation from E Cordus as a motto for the doctor's office Yours truly,

B H PUTNAM, M D

CHICAGO, Dec 5, 1896

To the Editor —Regarding the quotation you inquire about I think that you have slightly misquoted At the time this appeared in print, something like seven to ten years ago, I copied these lines, which were accredited to *Texas Journal* They read as follows

"God and the doctor we alike adore
Just on the brink of danger, not before,
The danger passed, both are alike requited,
God is forgotten, and the doctor slighted"

N H CHURCH, M D

5 Blue Island Ave

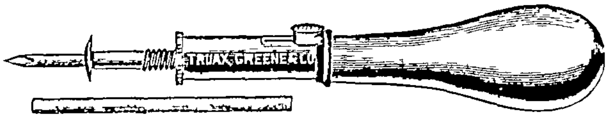
NEW INSTRUMENTS

A NEW TROCAR AND CANULA WITH SAFETY GUARD

BY JOHN S MARSHALL, M D
CHICAGO

This instrument was devised with a view to prevent accidents in the opening of the cavities of the antrum, the chest and cysts, hydroceles and large abscesses

There is always danger when puncturing the antrum of Highmore, the thorax and other cavities which are filled with fluid abnormal in character and which must be evacuated of the trocar under the force sometimes necessary to puncture the tissues forming the walls of these cavities, injuring the organs contained within them, or of passing through the opposite wall and causing injuries to structures beyond



To render such accidents impossible this instrument has been fitted with a safety guard entering the handle of the instrument by means of a screw thread which makes it possible for the operator to set the guard so that the trocar and canula will enter at any depth that he may judge will be the thickness of the walls of the cavity to be punctured, without fear of injury to the important structures within or beyond The handle also contains a device, operated by the thumb, which throws the canula forward, covering the tip of the trocar and allows the trocar to be withdrawn, leaving the canula in position Its construction is such that the parts are easily separated and rendered aseptic by boiling

Charles Truax, Greene & Co are the makers of the instrument, to whom I am indebted for the mechanical perfection of the idea

36 Washington St

IMPROVED ATOMIZER

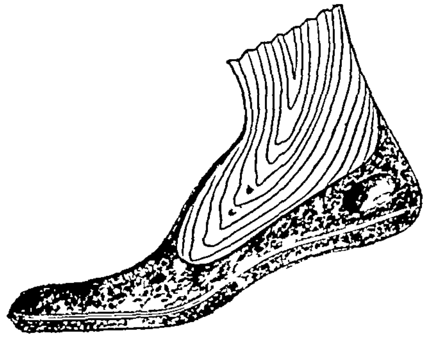
To throw larger quantities of the medicinal fluid on the surfaces of the lesions in nose and throat affections, Müller of Carlsbad has added to the Körting apparatus a metal spiral inside the tube The fluid is forced through the very small bore of this spiral at a pressure of 3 to 6 atmospheres, and with an opening of ½ mm in diameter, a liter will be expelled in three minutes, and yet the pressure of the spray as it emerges is not strong An olive tip excludes the air when the nose is sprayed and a bell shaped piece answers the same purpose for the mouth Müller has derived great benefit from

Carlsbad spring water applied in this way, especially in ozena, although the spray produced a slight transient hemorrhage at first in these cases He adds that any salt solution would probably prove equally effective —*Wien Klin Rundschau*, November 15

A NEW RUBBER FOOT

An improvement has been made recently in artificial feet by A A Marks

The new invention consists of the insertion of a mattress of canvas in which is imbedded side by side a layer of narrow, flat steel springs The canvas holds them in the pocket, in which they slide freely, and the ends are capped with metal to prevent their perforating the rubber and leaving their proper bed



The rubber which rests above this mattress is spongy, containing, therefore, a large percentage of air, increasing the lightness and also the flexibility of the foot Further, just above the posterior end of the mattress in the heel there is a large air chamber so arranged that it can not burst, and thus preventing the heel from matting or failing in elasticity

The operation of this steel spring mattress is to throw the toe back as it is bent in walking and thus to materially assist in locomotion

IMPROVED POCKET CUSPIDOR

The neat little nickeled case scarcely takes up any more room in the pocket than a package of cigarettes and is eminently adapted to its purpose The inner receptacle is easily removed to be cleaned and boiled, while it closes moisture proof, with an inside cover of amianthus It is the invention of Dr Petit of Paris —*Bull de l'Acad de Méd* , November 10

PUBLIC HEALTH

Tuberculosis in Animals —Cadiot has been making a study of the pulmonary diseases of dogs, etc , which he finds are very often tuberculous and complicated by external lesions The frequency of tuberculosis among dogs, cats and parrots he considers a menace to human beings —*Bulletin de l'Académie de Méd* , November 17

Preventive Inoculation of Typhoid Fever —The unexpectedly favorable results obtained in India under Haffkine's direction with preventive inoculation of cholera (more than 100,000 persons inoculated) have led to numerous experiments in similar inoculation of typhoid fever Iwanow describes in the *Bolnit schnaja gaseta Botkina,* No 20, successful immunizing of monkeys, and Pfeiffer in the *Deutsche med Woch* , No 46, relates his favorable experience with inoculation of healthy persons and describes his methods, adding that preventive inoculation promises to render great services in epidemics of typhoid fever, and in military camps threatened with it

Sanitary Regulations in Brazil —The regulations in Bahia as recorded in the *Gaceta Médica*, in regard to the sale of meats, seem strange to northern readers The shops must be built according to certain requirements as to size, situation and ventilation, not less than four meters in each direction, and are never to be used as a habitation nor for any other purpose than a market, with white marble slabs for cutting the meats and marble or tiled floors sloping down to the street No meat must be allowed to touch the walls, nor be exposed to the sun, and it is strictly forbidden to sell meat that has been killed over twenty four hours All meat over twenty-four hours old must be thrown into the sea The butchers are licensed and required to wear white aprons and caps when at work, with their number exposed, and fines are to be enforced for neglect to comply with any of these regulations

Can Not Regulate Noise of City by Injunction —A bill was filed, in the case of Wende v The Socialer Turn Verein, asking for a perpetual injunction to restrain the defendant from permitting any one to play upon its bowling alley and from permitting loud and boisterous noises to be made by persons there At the close of the complainant's evidence the judge said "I can not regulate the noise of the city by injunction and I am not going to try it If these people have made any noise there, that injured this property, the property of the complainant here, she has her remedy at law, she can go before a jury, and if she can satisfy a jury that her property has been damaged by their acts, or by their improper use of their premises, then she can get a verdict " This, the appellate court of Illinois, first district says, in an affirmatory decision handed down Nov 19, 1896, is a terse expression of its views Choosing to live in a great city, it adds that the complainant must take such use of adjoining property as the inevitable concomitant of city amusements

Salary in Lieu of Fees —The New Jersey statute relative to morgues and morgue keepers provides that the fees and expenses of morgue keepers for the recovery and care of the bodies of unknown dead shall be fixed by the board of free holders and paid by the county collector, and it also provides that they shall be entitled to a burial fee not exceeding $10 in each case Under color of the foregoing, the board of free holders of Camden County passed a resolution in 1887 that "the morgue keeper shall perform such duties as are provided for by law, and shall receive a salary of $500 per annum, payable quarterly by the county collector " The morgue keeper from that time until 1893 received the salary, and then, after the expiration of his term of office, applied for a writ of mandamus to compel the board of freeholders to fix his fees and expenses as morgue keeper But the supreme court of New Jersey says, Powell v Board of Chosen Freeholders, June 24, 1896, that the only ground that the payment and acceptance of the salary could be accounted for on, was that it was in satisfaction of the fees and expenses allowed for the performance of the duties imposed by law, and that with seven years' salary in his pocket the claimant could not get the "fees and expenses" also

Power of Iowa Boards of Health to Employ Physicians —In an action brought by a physician to recover from a county for services rendered and supplies furnished a pauper, the supreme court of Iowa holds, Tweedy v Fremont County, Oct 29, 1896 that it must not only be shown that the patient was a pauper, but that his parents or other relatives liable therefor are unable to pay the claim Conceding that his inability to pay is made to appear, the fact that he is a pauper and a county charge does not show that there is no relative who is liable and able to pay it It frequently happens, continues the court that the needs of a poor person are so urgent that relief must be furnished him at the expense of the county, for lack of time to compel relatives who are liable for his support to relieve him In such a case the person relieved is a county charge although the county may be able [illegible]er from his relatives the sum which it has paid on [illegible] ter 151 of the Acts of the 18th General Assembly provides that "every local board of health shall appoint a competent physician to the board, who shall be the health officer within its jurisdiction, and shall hold his office during the pleasure of the board" Also that "the local boards shall also regulate all fees and charges of persons employed by them in the execution of the health laws and of their own regulations" As that is the latest enactment on this subject, the court holds that it must prevail so far as it conflicts therewith, over section 1366 of the Code which provides that "all claims and bills for the care and support of the poor shall be certified to be correct by the proper trustees and presented to the board of supervisors, and if they are satisfied that they are reasonable and proper, they are to be paid out of the county treasury" In this case allowance by the board of health of $6 per visit for thirty four visits and $1 for fruit furnished the patient is considered, under the evidence, reasonable and just, though the board of supervisors had objected to allowing same

Removal of Garbage Controlled by Board of Health—Where power is conferred upon the common council of a city to regulate by ordinance the collection and removal of garbage and offal, the supreme court of errors of Connecticut holds, in the case of State v Orr, decided June 15, 1896, that it has authority to pass an ordinance which provides that no person shall collect and transport such refuse matter as accumulates in the preparation of food for the table without first having obtained a permit from the board of health But 'refuse matter," as the term is thus employed, the court says can embrace nothing which has not been refused or rejected as unsuitable for table use It may be thus rejected because it has little or no value for human food, or because it is decayed or unwholesome It must in its nature be perishable, and can include little which is not liable to become decomposed or offensive if left where it falls In fact, the term as here used, can only extend to matter which is in effect noisome or which has been rejected by the owner as worthless Meat trimmings, potato parings, specked apples and many other things of a like character might be thrown away in preparing table dishes, and yet properly utilized afterward for other purposes Under such an ordinance as the one in question, whatever is not abandoned as worthless, remains property, which so long as it does not constitute a nuisance, may be sold or otherwise disposed of at the will of the owner By the board of health contracting with a single person to collect and remove garbage from the entire city or with several persons to collect and remove it from as many different portions of the city, or contracting with respect to a part of the city or to certain buildings, leaving the removal of garbage from other places open to those who obtain from its clerk a proper permit, the court further holds will no monopoly be created by which the rights of citizenship will be infringed upon Over any such occupation a strict watch must be kept, and the general police powers vested in the city justify the implication of a right to limit the number of those who pursue it In a prosecution for the violation of an ordinance like the above, evidence is properly excluded that the defendant had been for many years engaged in collecting and removing garbage in the city in carts so constructed as to satisfy the requirements of the ordinance, and applied for a license to continue, but met with a refusal, the board of health having a right to limit the number engaged in this particular occupation and he having no absolute title to a license Even if the number of licenses issued was unreasonably small his only remedy, if any, would be to apply for a mandamus to compel the board to grant him one He could not pursue the business because wrongfully refused a license Nor could he justify himself by showing that the garbage he collected came from certain restaurants, with the proprietors of which he had contracts for its removal, such evidence being inadmissible If the evidence had shown both that the contents of the defendant's cart, while they had been rejected for table use, were not offensive and were in his possession as the agent or purchaser of the original owner, then, the court says, in line with what has been suggested, he would have required no license

A Home made Filter for Domestic Purposes—In the *Brooklyn Medical Journal*, September, Prof Peter T Austen of the Brooklyn Polytechnic Institute has devised a simple method that takes advantage of the property of alum, in minute quantity, to form a gelatinous precipitate with bicarbonate of lime in solution, and nearly all drinking waters contain more or less of that substance This precipitate serves to entangle suspended matters so that waters containing clay and mud may be filtered perfectly clear, even through a coarse filter The alum itself is not carried through the filter, but forms a part of the precipitate, and is removed by filtration This should be well understood, although if a minute amount of alum were left in the water its effects would not be noticeable, and even if present in larger amounts, it would not be at all dangerous "The method of filtration is simple in the extreme An oil bottle, or any long, narrow necked bottle, serves for the filter Tie around it a string soaked in kerosene, about half an inch from the bottom, set the string on fire and hold the bottle bottom up When the string is burned out the bottom of the bottle is thrust into cold water If properly done, this causes the bottom of the bottle to split off evenly The rim of the glass should now be burred off a little with a round file to remove any sharp edges that may be left The bottle is then thoroughly cleaned and placed neck downward in a convenient support as, for instance, through a hole bored in a shelf, or it may be allowed to stand in a wide mouthed bottle, resting by its shoulders on the rim of the mouth A small handful of cotton wool is now thoroughly wetted by squeezing it in water, and shreds of it are dropped into the bottle until a layer about two inches deep has been made The shreds should be dropped in carefully, so as to distribute them evenly, and not to let them pile up in the middle or at the sides When enough cotton has been dropped in, a cup or two of water is poured in and the bottle gently tapped This consolidates the mass and finishes the making of the filter bed The amount of alum needed to coagulate the water sufficiently for filtering need not, as a rule, exceed two grains to the gallon, and in many instances may be less, but in certain cases of very dirty waters, such as that of the Mississippi River, the amount of alum may be increased to four or even six grains per gallon The alum is best kept in a solution of such a strength that a tablspoonful of it will contain a grain To save trouble, the following prescription will enable one to get enough of the solution put up at any apothecary's to last for a considerable time

℞	Alum	128 gr
	Aquæ dist	16 oz
	Misce, ft solutio	

"I may add that the expense of this prescription, including the bottle, should not exceed fifteen cents The treatment and filtration of the water is best done as follows A gallon of water is placed in a clean tin pail and two teaspoonfuls of the alum solution are added It will save time to make, once for all, scratches on the inside of the pail, showing the height of one, two or more gallons of water It is then well stirred and mixed with a clean tin dipper It is best to keep this pail and dipper for this use alone They should be kept scrupulously clean, and frequently well scoured with sapolio or a similar kind of soap After mixing, the water is allowed to stand five or ten minutes, and then poured, by means of the dipper, into the filter It will run through rapidly if the filter bed has been properly made, and will be as clear as crystal, and not seldom will form an astonishing contrast with the original water The first half pint of the water passing through should be rejected The filtered water may be caught in a pitcher or in any other convenient receptacle A filter bed will last a day, but it is not advisable to use it longer Each day the used filter bed should be thrown away and a fresh one prepared The method may, of course, be applied to any of the many filters in use by simply adding to the water to be filtered one or two grains of alum to the gallon It will be a poor filter, indeed, that will not filter clear after this addition "

The Ministry of Health —The London letter of the *American Practitioner and News*, October 17, quotes an important address by the late Sir B W Richardson, in favor of a national bureau of health for the British Empire, with a president, a chief officer and a competent body of officials under them The construction and duties of the Ministry of Health would lead to several divisions of labor In addition to the registration of births, deaths and marriages, a complete system of registration would be established and the returns supplied would include not only the diseases affecting human kind, but diseases affecting animals and plants The reports of meteorologic conditions would be duly sent to the ministry and the relations of meteorologic states and the prevailing health would be effectively and systematically traced out The returns of coroners' courts would likewise be sent, and to the Ministry of Health would be referred all the work now carried out by the medical department now under the control of the Local Government Board The working of the act dealing with adulteration and the carrying out of public analysis would of necessity be brought under its direction Officers appointed under the new regulations would especially report to the Ministry of Health on sanitation of the factories in the whole of the kingdom The work hitherto done by the veterinary department of the Privy Council would be transferred to the same ministry Prison and police supervision and the supervision of public works would also become functions of the Ministry of Health Sir Benjamin Richardson suggested that there be six departments, the registration department, the local government department, factory and industrial department, analytic and chemic department, veterinary department and public works and prisons department

BOOK NOTICES

Manual for the Medical Department, U S Army, 1896

The Army Regulations issued in 1881 was an exceedingly bulky octavo, which was supposed to contain instructions for every one in the military service on all points connected with his duties, privileges, etc The edition of 1895 was on the contrary a rather thin volume, as it contained only general regulations or such as affected every officer and man of the army irrespective of corps This issue had to be supplemented by special manuals giving in detail the regulations affecting each individual as a member of his particular corps There has, therefore, just been published by authority of the Secretary of War for the use of the Army of the United States a small octavo volume of 120 pages, compiled under the direction of the Surgeon General and entitled a "Manual for the Medical Department, 1896" This volume does not in any way alter the current methods of the department. It merely separates the departmental regulations from the general army regulations, with which they were formerly embodied and presents them revised to date for the use of army medical officers It has been compiled with the utmost care and contains the gist of all orders, circulars and decisions published since the issue of the Army Regulations of 1881. It gives, however, no instruction as to the manner in which various reports and record books should be kept. It is understood that all such instructions will hereafter be printed as notes on the blank forms to which they relate, and that these notes having been approved by the Secretary of War, will have the force of army regulations This system places the requirements and methods of his department very concisely before the army medical officer, but it will be difficult for an outsider, a member of the National Guard, for instance, to get information covering all points unless he is possessed not only of a copy of the manual but of a series of the blank forms and record books or of the notes or directions that are printed on them

Handbook of Subsistence Stores, U S Army, 1896

Under this title the War Department has just published a volume of 200 pages compiled under the direction of the Commissary General from monographs written by officers of the Subsistence Department This volume is intended to be to the Subsistence officers what the dispensatories are to medical men and pharmacists It gives them a concise and accurate description of the various articles borne on the list of subsistence stores of the army, with the source or preparation, physical appearances and properties, tests of purity and methods of preservation of each of the articles

For facilitating references the monographs or their abstracts are arranged alphabetically, beginning with that on "apples," and ending with "vinegar" Under the heading "flour" are described the grades and methods of milling, the quality of the gluten, the quality of the starch, the best flour for making bread, winter wheat and spring wheat flours, sweating of wheat and flour, strength of flour, sprouted wheat flour, earthy smelling flour, souring of flour, good keeping flour, variation in the chemic composition, mode of packing, storage, brands of flour, uniformity of quality in mill brands, effects of age on wheat and flour, and lastly methods of testing including that by the extraction of the gluten Under the title "baking powders," are given tests for tartaric acid, potassium, lime, alum, ammonium salts, phosphates and sulphates, with methods for determining the quantity of carbon dioxid liberated and of the starch present as filling An appendix contains notes on canned goods and on the various insects that are destructive to articles of subsistence, such as the dermestes lardarius or bacon bug, the musca vomitoria or meat fly and sundry species of calandra or weevils As the articles are essentially practical the handbook will be of great assistance to subsistence officers by giving them a thorough knowledge of their stores

NECROLOGY

EUGEN BAUMANN, M D , of Freiburg The medical world had scarcely realized the importance of the discovery of iodin in the thyroid gland, and the far reaching benefits to be derived from this knowledge, and the application of thyreoiodin, when the sad news comes that an unsuspected heart disease has ended the career of the gifted discoverer before he was 50 His early scientific training was that of a pharmacist, and his tastes lay in that direction to the end, although he attained such renown as a chemist and physiologist His studies of sulphone resulted in the discovery of those wonderful hypnotics, sulphonal and trional, and from his laboratory came also the great analgesic, phenacetin

Professor HANOT of Paris The sensational suicide of this successful and talented physician and instructor in his [illegible] year can only be explained by overwork and domestic troubles He was found dead in his room with a vial of potassium cyanid in his hand The specialty he had made his own and to which he made most valuable contributions, was the pathologic liver His monographs on this subject from every point of view were gems that evidenced infinite research and brilliant mental qualities The [illegible] hi[illegible]lished art[illegible] column in the *Progre*[illegible] 31

Georg Richard Lewin, M D , in Berlin, age 76, one of the remost leaders in medical science of the latter half of the ntury, a famous physician and conscientious instructor ypodermic injections of sublimate had been tentatively tempted before him, but his great work on the treatment of philis with mercurial hypodermic injections of mercury 868) established the methods, the dosage, and all other etails with such accuracy and skill, that even to this ay they are accepted as the standard, and have been applied thousands upon thousands of patients, and in every land, ithout serious injury to a single patient, as he stated recently ith pride Other important works were on syphilis of the rynx, interstitial myositis, leucodermia (founded on over 000 observations), atrophy of the face, etc , amounting in all 55 large works The monographs published in the *Annals* the Charite, form alone a total of almost 1,100 pages All nds of honors had been bestowed upon him at home and broad, and death surprised him in the midst of a most benefi ent and varied activity One of his latest addresses, for which e had prepared with great care, was delivered at a public ealth meeting, on the diseases caused by the inhalation of ust

Pinckney Webster Ellsworth, M D , (College Physicians nd Surgeons, N Y , 1839) a grandson of Oliver Ellsworth once Chief Justice of the U S Supreme Court, and a son of x Governor Wm W Ellsworth , born in Hartford, Conn , Dec , 1814, died in the city of his birth, November 29 His commission as a surgeon U S V was dated August 3, 1861, and is reputation soon extended much beyond the boundaries of is State

Gustavus B Tyler, M D , at Owensboro, Ky , December 1, ged 76 He was at one time a West Point cadet and he grad-ated from Jefferson Medical College, Philadelphia in 1845 Ie was one of the best known general practitioners in the tate

SOCIETY NEWS

The Anderson County Medical Society has been organized t Lawrenceburg, Ky , with Dr Frank B Powers, president, nd Dr G Lillurd, secretary

The Ohio Dental Society held its annual meeting at Colum ous December 2 The election of officers and directors esulted as follows President, Dr L E Custer, Dayton , first ice president, Dr Grant Molyneaux, Cincinnati , second vice resident, Dr L L Barber, Toledo, secretary, Dr L P Bethel, Kent, assistant secretary, Dr H T Harvey, Cleve and , treasurer, Dr C I Keely, Hamilton , directors, three ear terms, Drs J R Callahan, C M Wright, O N Helse, W D Snyder, two year terms, Drs W H Hirsch, E G Barnett, A E McConkey and C R Buter , one year, Drs C H Harroun, J A Lupton, W H Hague and J Taft

MISCELLANY

Professor E Fraenkel of Breslau has been restored to his ormer scientific and professional activity by a recent successful operation for progressive myopia

New Clinic in Moscow —Madame Basanow has built and presented to the University of Moscow a hospital and clinic for diseases of the throat, ear and nose, with ample endowment for twenty-five beds and the salaries of those in charge

Koch's Missions —Prof Robert Koch has just returned from the eastern provinces of Germany, where he was sent to investigate the numerous alleged cases of leprosy, which he found to be a mistaken diagnosis He has now started for South Africa at the request of the Cape Government, to make a study of the rinderpest

Progress in Surgery of the Joints —The tendency seems to be to avoid anchylosis in the cure of tuberculous affections of the articulations, and Calot even states that no lameness should remain after a coxalgia is cured Of course this means an early and prolonged course of treatment with careful supervision

Experiments on Thyroidectomized Dogs —Gottlieb states as the results of his experiments on five dogs, that thyroiodin alone is not able to keep dogs alive whose thyroid glands have been removed, but that this has been accomplished by the thyroid extracts (thyroden), and he therefore concludes that there must be in the thyroid gland something more than the merely physiologically effective substance —*Deutsche Med Woch* No 15

Insurance Lost by Use of Intoxicants —In the case of Rainger v Boston Mutual Life Association, the supreme judicial court of Massachusetts said, Oct 26, 1896, that inasmuch as it could have no doubt that the habits the insured had of using intoxicating liquors to excess, increased the risk, his answer, when he made application for insurance, that he used a "glass of beer once in a day or two," must be held, as matter of law, to have voided the policy

The New York Summer Rest Society —One of the noticeable summer philanthropies is the opening of a house of rest for self supporting gentlewomen who can secure board in a beautiful New Jersey town for $3 50 per week The society aims to provide generous board and home privileges, while there shall also be complete change and relaxation after the winter's work The society has purchased a house and twenty acres of woodland near Woodcliff (once Pascack), N J , and will open the Summer Rest from June 1 to October 1

Ovarian Therapeutics —Touvenaint reports fifteen cases treated and benefited by the administration of ovaries from a young cow, dried to a powder at a constant temperature of 25 degrees C His conclusions are favorable and confirm those already announced by others The dose should not average over 0 24 to 0 40 centigrams a day, but it is safe to prescribe and can be kept up for weeks or even months It seems particularly indicated in amenorrhea and chloro anemia, and proves useful in the troubles due to the natural or artificial menopause —*Journal de M de Paris*, October 25

International Privileges to Physicians in South America —In contrast to the restrictive measures recently adopted in Europe, the various countries of South America have entered into an agreement to recognize impartially the graduates of each other's medical and pharmaceutical colleges, and accord them the same privileges as natives This means in the Argentine Republic and some others, the payment of a fee of $150 to $300 (300 to 600 pesos), when the applicant's diploma is examined and accepted by the university faculty Brazil and Chile are the only countries which have not yet signed the agreement

Exclamations Admissible in Evidence —Exclamations or complaints made by a person undergoing physical examination by a physician, with a view to ascertaining the extent of his alleged injuries, and apparently made in response to manipulations of the person's body or members by the physician, the supreme court of Georgia holds, in Broyles v Prisock, decided Jan 13, 1896, are admissible in evidence, though such person was not under the treatment of this particular physician and the examination was being made solely for the purpose indicated Whether or not the exclamations were involuntary, or the complaints were *bona fide* is for determination by the jury, under all the evidence submitted

Ovarian "Pockets"—The *Wien Klin Rundschau*, November 15, contains a contribution to our knowledge of the ovaries and tubes by an extensive study of the same organs in the lower animals It seems that they are much more complicated in them than in the human species, with, in some cases, an actual pocket to contain the organs, varying in size with the species The ovaries and tubes are in none of them in actual contact and the transmission of the ovum is accomplished by the fluids, etc, as in man Those of amphibious animals and reptiles resemble the human organs more than the rest, and it is curious to note the similarity that prevails in the most dissimilar species as, for instance, in certain rodents, beasts of prey, hoofed animals and edentates

Honors to Army Surgeons—The *Revista de Sanidad Militar*, a semimonthly Spanish journal, contains in its columns many articles which indicate that the Spanish people recognize that a war *is in progress* in the Island of Cuba It publishes the special orders of the War Department or such of them as possess an interest for medico military readers In its issue for the two weeks ending Sept 15, 1896, we find that the services of army medical officers meet with appropriate recognition, for no less than eight special orders were issued during the period August 27 to September 9 granting the Red Cross of the First Class of Military Merit to medical officers for their gallant conduct in certain specified engagements with the Cuban insurgents

Contradictory Results of Castration for Hypertrophy of the Prostate—The *Gaz. Méd de Paris*, of November 14, quotes an article by Socin urging the necessity of more exact indications for castration and section of the vas deferens, as the success in some cases is offset by the failure in so many others The single case benefited in his own nine operations, was a man whose prostate gland had been partially resected two years before He states that Kroenlein reports two absolute failures, Kraske the same, and Czerny has had three patients whose troubles seemed to be much aggravated by the operation On the other hand, Bruns has cured two cases by castration and Gelpke has resected the vas deferens in two cases, one of which was a failure but the other was a great success We trust, however, that the day has passed when removal of any normal organs for any purpose will be countenanced for a single moment

Kola Preparations—The *American Therapist* has the following warning under this subject "Kola preparations in endless array have been introduced during the past year, and the public has been educated through newspaper puffs to look for marvelous strengthening power from any proprietary form of kola, while he legitimate use of kola medicinally has rather decreased, and it has been more or less discredited in the minds of the medical profession The opinion is logical that the principal therapeutic value of kola lies in its caffein, if there is special potency in the combination of principles in the crude fruit, it is also true that this has been observed only when the fruit is taken fresh, and not dried, transported and stored for months, and finally incorporated into palatable and elegant wines, elixirs, tablets, etc In France kola preparations have long been popular, but there is no pretense there to deny that caffein is used and kola gives the name

Intraprofessional Ethics—Dr H C Wood has issued in pamphlet form his address before the last graduating class of the medical department of the University of Pennsylvania His closing paragraphs dealt with the question of the ethical deportment of young practitioners toward their professional brethren—the question of intraprofessional ethics His thoughts on this subject are drawn up in the form of a heptalogue of aphorisms, that may be read with interest and profit by others than those for whose counsel they were intended "The soul of professional ethics, says Dr Wood, "is the recognition of the universal brotherhood of medicine, and the application of the Golden Rule To do unto others as you would have them to do unto you Based upon these principles, I venture to offer you certain aphorisms or rules 1 To consider the doctor as a member of your o[illegible] [illegible] an inherent right to your medical services, but to remember yourself not to abuse this right 2 To consider any discovery or any invention you may make as belonging not to yourselves but to the general profession 3 Never in any way to laud your own medical skill or to attempt to supplant in public or private estimation one of the medical household 4 To join yourself as soon as may be to the incorporated companies of your fellows for scientific and social intercourse, and for the cultivation of that professional conscience which often binds men more closely than their personal sense of right and wrong 5 Through good and ill report to stand by members of your own profession, unless they be guilty of moral evil"

Discovery of a New Ferment in the Blood—We are all familiar with the transformation of amyloid substances into fatty matters, urea and glycogen, and the fate of the two latter But our knowledge of the fate of the fatty matters has always been vague, and an important advance has been made by Hanriot's discovery of a saponifying ferment in the blood, to which is due their transformation into fatty acids These in turn form stearates of soda in combination with soda, and are then transformed successively into butyrates, acetates and finally carbonates of soda, which pass again into the blood His experiments with monobutyrin of glycerin which led to this discovery, are described in the *Bulletin de l'Académie de Médecine*, of November 10

Object of Commission de Lunatico Inquirendo—The main purpose of a commission de lunatico inquirendo, the supreme court of Pennsylvania says, *in re* Misselwitz, Oct 5, 1896, is to determine in the first place, whether the subject of the inquiry is a lunatic or not, and if he is found to be a lunatic, then to provide for the safeguarding of both his person and his property Pending the inquiry it sometimes becomes necessary to make temporary provision for the custody and safekeeping of one or both The appointment of a temporary custodian or receiver pending the litigation to prevent mismanagement or waste of the alleged lunatic's property, etc, rests in the sound discretion of the court in which the inquiry is pending, and it requires a clear case of abuse of that discretion to justify the interposition of an appellate court

A Contention Over the Site of a Consumptives' Home—The *Boston Medical and Surgical Journal*, July 23, refers briefly to the difficulties attendant upon the locating of the new Free Home for Consumptives, in that city About one week ago the mayor of Boston gave a hearing in the aldermen's room to the remonstrants who have petitioned the mayor not to approve a measure passed by the city government allowing the erection of a new building upon the Quincy Street grounds of the Free Home for Consumptives The said building is to be four stories high and some sixty by over one hundred feet long [illegible] to be built without the brick dividing wall required [illegible] building ordinances of the city The petitioners [illegible] the risk to the patients and the neighbors by fire [illegible] the erection of a hospital building without [illegible] being taken for its safety They claim dama[illegible] residential property and an unnecessary ex[illegible] zens to infection They claim that such a [illegible] easily and usefully maintained at a grea[illegible] dwelling parts of the city Several [illegible] and the hearing was continued to a later [illegible]

Angina Pectoris in Neurasthenia—In [illegible] nal, Dr Rendu is quoted, from [illegible] nal de Médecine Jul 10, as [illegible] case as one of neurasthenic [illegible] of robust appearance, no [illegible] typhoid, malaria and [illegible] last five years had been [illegible] this he regards as suffe[illegible] kind of [illegible].

and finally becoming more marked, accompanied by feeling of oppression and agony, with, on some occasions, syncope. After a short period in hospital these attacks became somewhat better, but returned to recur daily. There was no physical signs of either heart or lung disease. Rendu considers the diagnosis in this case one for reflection as to whether it were a case of true angina pectoris or not. In the case in question, as there were no signs of cardiac affection, as angina is uncommon up to the age of 40, and as the pain began peripherally, the author was rather inclined to deny its being true angina pectoris. The previous history of influenza would also, he considers, be in favor of the less grave condition; and as the patient also suffered from headache, sleeplessness and dyspepsia, the conclusion come to was that the case was simply neurasthenic. On these grounds the man was treated, with the result that the attack rapidly subsided and the general health was restored.

Cures of Insanity after Many Years.—Ventra warns against legislation to allow insanity as a cause of divorce, as improved methods of caring for the insane are resulting in cures, even after all hope has been abandoned. He has forty cures of this kind to report in his experience with the 3,531 insane patients received at Nocera, during the last thirteen years. Fourteen were cured during the fourth or fifth year after their insanity had developed; 6 during the sixth to seventh; 6 during the eighth or ninth; 8 between the tenth and eleventh; 3 between the fourteenth and fifteenth, and 3 in the twentieth year. Of these 21 were female, and 19 were male patients, and the ages varied from 20 to 54. In 19 the disease was hereditary, but in none were there traces of congenital degeneracy. The cure was spontaneous in 13; favored by work in 16; by injections of morphin in 5; by follicular dysentery in 1; by typhoid ileus or erysipelas in 1; by chronic intestinal catarrh in 2; by an operation for cataract in one and the extract of cannabis indica in another. The forms of insanity cured where chronic sensorial delirium in 18; primary paranoia in 8; lypemania in 7; mania in 6 and hysteric frenzy in 1 case.—*Gaz. degli Osp. e d. Clin.*, October 25.

Suppression of the Crystalline Lens.—Since Fukala suggested this method of treatment for progressive myopia seven years ago over 402 operations of the kind have been published, as stated in an article in the *Annales Méd. Chir. de Liège* for October: Fukala, 37; Hippel, 60; Thier, 50; Sattler, 86; Valude, 2; Abadie, 3, etc. Some perform discission alone, and others follow it by extraction. Some also make a very small incision, and others a large one. The general procedure seems to be to test the power of absorption of the lens in regard to the vitreous humor, and proceed accordingly. When there is a congenital cataract, for instance, the lens is attacked very slightly. If it does not swell or absorb much, the operation is recommenced a week later. If the case is carefully watched, there is no fear of hypertonicity; if the finger reveals that the pressure is increased, and if the field of vision is narrowed all that is necessary is to make a simple linear extraction, with or without suction of the lens. The general opinion seems to be that discission is to be preferred under 25 years of age; above this, some extract, others still prefer discission. All state that by far the best results are attained on young patients. The degree of myopia that justifies intervention is above 10 D. in children; 14 to 15 D. in adults, according to Fukala, Pflueger and Schweigger; or 16 to 18, according to Abadie. Whether to operate one or both eyes is still disputed; some asserting that it is best to operate one eye, and reserve that eye for near work, while the other, with glasses, serves for all ordinary purposes. Thier seems to be the only operator who does not hesitate to perform the operation when there are choroid lesions, which the rest consider a counter indication. The exact state of the eye should be determined with atropin before attempting any intervention. Valude had one patient become totally blind from displacement of the retina, and Lang reports two cases of displacement in his five subjects. The visual acuity is often increased, sometimes doubled or even quadrupled. Hippel has noted an improvement of 1–10 to 2–10 and even 7–10. Sattler has seen slight improvement in twenty-eight of his eighty six cases, but in eighteen there was no perceptible improvement. The general conclusions are that it may prove of great benefit to young persons with such myopia or feeble sight that any kind of work is impossible; but that interference with older persons who are able to pursue their usual occupations is unadvisable. Discission is by far the least dangerous method of procedure. It lengthens the treatment slightly, but the traumatism is much less than from extraction, the danger of infection is less, and also of displacement of the retina.

Dedicatory Exercises of the Chicago College of Dental Surgery.—The dedicatory exercises of the new buildings of this College took place on Friday evening, December 4, when speeches were made by Dr. Truman W. Brophy, W. M. Lawrence, D.D., Judge Richard S. Tuthill, Dr. John B. Hamilton, Professor M. P. Thomas of Lake Forest University, and Dr. C. N. Johnson.

The exercises were opened by the Dean, Dr. Brophy, who delivered a brief address in which he spoke of the growth of the college and of the history of dental education in the city of Chicago. He said the Chicago College of Dental Surgery was the first institution of its kind in this country to introduce and use for the benefit of its students a complete apparatus for the cultivation of bacteria, thus demonstrating the active agents that cause caries of the teeth and methods for effecting their destruction. The institution was the first to organize freshmen students into classes for practical work in dental technology, both operative and prothetic. In addition to these innovations in teaching, clinics were organized in the college and conducted for the benefit of the senior students by the most skillful and successful practitioners. The clinical instruction is still carried on and to an extent unequaled in former years. Realizing the necessity of securing a permanent location for the college, the lot was purchased upon which the building now stands in 1888, situated on the corner of Wood and Harrison Streets. The first section of the structure was erected in 1893, and the first course of instruction began in it November 1 of that year. Beginning with the present year plans were perfected and the building of 1893 has been doubled in capacity, so that the college now consists of a six story structure, having a frontage of 85 by 120 feet. Each floor contains an area of 10,080 square feet, divided in accordance with suggestions and plans made, after having carefully examined the best regulated dental schools in the United States, thus enabling the faculty to incorporate the most modern features in its construction. Dr. Brophy then traced the growth of the college from the summer of 1883 up to and including 1895-96. The faculty of 1883 consisted of three, matriculates 18, and no graduates. In the session of 1895-96 the college has 87 teachers, and 503 matriculates.

Dr. W. M. LAWRENCE then followed with an address in which he said that he knew of no similar history along educational lines anywhere. He had the honor to be somewhat connected with the Chicago University and its growth had been phenomenal, yet, at the same time, he could say pretty accurately that the figures given by the dean proportionately exceeded any statistics which we might have the pleasure of presenting for the contemplation of the citizens of Chicago. He congratulated the faculty on having erected such a fine structure. He congratulated the cause of sound learning in having another illustration of faith in the genius of man, the power of the human heart and the capacity of the human mind.

Judge TUTHILL said that when he was a boy people never had their teeth attended to and that every old man and old woman must have been toothless, that they went out of the world in about the same condition as to teeth that they came into it. At that time everyone seemed to think it was the normal arrangement and that people when they got old had no business with teeth. He believed that nothing had been done in medicine or surgery that had so added to the happiness of mankind as the work that had been done by men skilled in the art of dentistry.

Professor THOMAS followed Judge Tuthill. He was glad to see evidences, from the history which had been given by Dr. Brophy, that the College was not simply growing in extent, but becoming a genuinely progressive institution, an institution which is adding not simply to its numbers in its faculty and students, but to its curricula or courses of study, to its enlarged and advanced requirements, an institution which [illegible] a better educational product, men who are better able to do the special work to which they are called and to which they are devoting themselves by virtue of the broad, generous culture which the College was giving them. This, to his mind, told more for the glory of the Chicago College of Dental Surgery than anything else which he had heard.

The next speaker of the evening was to have been Dr. Nicholas Senn, but in his absence the [illegible] by Dr. John B. Hamilton, Professor of Principles and [illegible] Surgery in Rush Medical College.

Dr. HAMILTON said [illegible] while the preceding speakers [illegible] interest to the students and [illegible] apt to think [illegible] thing was modern [illegible] the [illegible] [illegible] to modern [illegible] period of darkness [illegible] In 1887 [illegible] Medical Congress [illegible] represented [illegible] [illegible]

[illegible] onal hospitals in the country and the story of the services of that noble, illustrious man in the Franco-Prussian war was enough of itself to elevate the profession to which he belonged to a high plane among the sciences and the educated men of the world.

Dr. C. N. Johnson said the first dental college was established in this country in 1839, but it was difficult to get at the curriculum of that college at that time. The number of teachers and students at the first or opening session was four. Dr. Johnson then dwelt upon the importance of educating the public to a proper appreciation of the practice of dentistry. The laity should be taught that the highest aim of dentistry was to add to the comfort, the longevity, the physical beauty and happiness of the human race.

At the conclusion of Dr. Johnson's speech the students, faculty and invited guests repaired to one of the operating rooms, where refreshments were served and short speeches made by Drs. W. C. Barrett, [illegible] W. Harlan, Theo. [illegible] Gilmer, W. [illegible] Copeland and Mr. C. B. Morrill and Dr. [illegible] [illegible]. Excellent stories were told by Mr. [illegible], the [illegible], Opie Read, the well known author; Mr. [illegible], the well known [illegible] and Mr. [illegible] and Dr. [illegible] recited a poem entitled [illegible] [illegible] the audience [illegible]

Cincinnati.

[illegible]

City Hospital caused by the resignation of Dr Frederick Kebler, Dr Henry Bettman was elected pathologist and Dr H Kennon Dunham, curator The salary of Dr Shields, receiving physician is raised from $60 to $75 per month

A colored minister of Bellefontaine, Ohio, died last week from inhaling the fumes from a lot of potato bugs he was burning in a pan on the stove

The question of establishing a city laboratory for the diagnosis of diphtheria as being discussed by the profession, and it is expected that some arrangement will shortly be made whereby this work can be done under the management and expense of the city The plan of the New York City Board of Health will doubtless be followed At the meeting of the Academy of Medicine the importance of this movement was emphasized by the presentation of the statistics of the treatment of antitoxin and the importance of the early diagnosis The consensus of opinion was that the first day of the disease was the time *par excellence* for the administration of the serum The statistics showed that the percentage of mortality had been reduced from 56 and 75 per cent to 2 per cent when the injection was made on the first day and to 5 per cent of all cases reported The experience of a Berlin Hospital was given as follows The mortality in past years has been 56 per cent, but was reduced by antitoxin to 4 per cent, the former high mortality was immediately reached when the serum gave out only to be again brought down after a new supply had been secured

Louisville

Removal —Dr H H Grant announces his removal from 415 West Chestnut Street to Suite 321, Third Floor of the Equitable Building, Fourth Avenue and Jefferson Street Dr T H Baker will have an office in the same suite

Burial permits —A new ordinance has just been recommended by the health officer concerning the return of burial permits to the health office, which should become a law at once Under the old law it was possible for a burial to take place and the return be handed in to the health office three or four days afterward The new ordinance is very explicit as to this, as no body can be moved until a death certificate has been handed in, and that within twenty four hours after the death This must be properly signed by the attending physician, and no burial can be permitted in any cemetery or burying ground unless a permit from the health office is presented This permit is to be filed away and subject to the health officer's inspection at any time A monthly report is to be made by the keepers of the cemeteries as to the date of burials and the name of the deceased and undertaker, in order that it may be checked with a corresponding record kept in the health office A penalty is provided for a violation of this ordinance by physicians, undertakers or sextons

The Western Insane Asylum —The forty second annual report of this institution, covering a period of twelve months, has just been issued from the office of the public printer During the twelve months 133 new patients, seventy males and sixty three females, were admitted, making a total number of patients under treatment during the year 774 Deducting the number discharged, died and transferred there were 623 patients remaining in the institution Sept 30, 1896 The death rate was only 5 68 per cent of the number of patients treated During the year fifty-one patients were restored and discharged, thirty male and twenty one female The cost per capita for the maintenance of the patients was only $148, but it would have been more had not a great deal of the farm products been raised on the farm of the institution, which is worked by the inmates, all harmless patients who are desirous of doing some work Of the 133 patients admitted during the year, 109 were born in Kentucky, fourteen in Tennessee, and the rest scattered through several States Seventy were married, thirteen widowed, and one man was divorced The ages ranged as follows Thirty four between 30 and 40 years, thirty three between 20 and 30, twenty two between 40 and 50, fifteen between 50 and 60, nine between 60 and 70, and six between 70 and 80 Eighty one of them were either farmers or members of farmers' families, two were day laborers, eleven were farm laborers or members of their families, six domestics, and three were ministers' daughters In their tendencies nineteen were suicidal, thirty one homicidal, and twenty were both suicidal and homicidal The preponderance of the number of cases drawn from the farmer class is surprising, though this has been noted by observers before At a recent meeting of trustees of the Lakeland Asylum (near this city), Dr Satterwhite, a member, advocated the employment of the inmates of the institution at some occupation that had been theirs before their admission if that could be ascertained, and if not to put them at something light, as shoe or broom making, farming in good weather, and other like employments This is the policy in vogue at the Western Asylum The remarks of Dr Satterwhite were well received, and a committee appointed to take action at once on the recommendations

Gray Street Infirmary —This institution, which is the hospital of the Hospital College of Medicine, will be ready for occupancy on December 20, with a full quota of nurses and fully equipped in every respect The building is a commodious though unpretentious one on the exterior, and will be a great addition to the Hospital College, giving the students in attendance an excellent opportunity of seeing practical instruction in the operating room and at the bedside

Dr Thomas Hunt Stucky, President of the Mississippi Valley Medical Association, is in poor health and has been ordered away by his physicians He will probably go to New York for a much needed rest

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Elimination of Mercury —Further observations made confirm Mironowitsch's announcement that considerable amounts of mercury are eliminated through the skin, which deprives the analysis of the urine of some of its importance in this respect Kudisch also announces that the mercury is eliminated through the urine much more rapidly and in much larger quantities when the injections are intravenous than when they are subcutaneous —*St P Med Woch*, November 7, from *Wratsch*

THE PUBLIC SERVICE

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Nov 28 to Dec 4 1896

First Lieut William H Wilson, Asst Surgeon U S A, is granted thirty days' leave of absence to take effect about Dec 20 1896

Change of Address

Breakey J F from Pontiac to Ann Arbor Mich
Dunne, A J, from Pittsfield to Springfield Mass
Eichberg, L R from Chicago to 332 W 85th St New York, N Y
Gilbert James L, from Bunker Hill to 801 W Broadway, Logansport Ind
Miller R E from 3205 State St to 291 31st St, Chicago

LETTERS RECEIVED

Alta Pharmacal Co, St Louis Mo Anderson Jos W, Ardmore Ia
Baker F F Jacksonville Ill Bittman Chas W St Louis, Mo, Bock, Charles Fort Wayne, Ind Battle & Co St Louis, Mo
Carter Howard St Louis Mo Chenoweth J S Louisville Ky Cooley J S Glen Cove, N Y Center, Chas Dewey, Quincy, Ill, Cullen G I, Cincinnati, Ohio Catlin, Samuel, Tecumseh, Mich
Daniel J B, Atlanta Ga
Fassett Chas Wood St Louis Mo
Hannold Fred C, Chicago Hare H A Philadelphia, Pa Hubbard, G W Nashville Tenn, Hummel, A L Adv Agency, New York, N Y, Horlick s Food Co Racine, Wis Haldenstein, J, New York, N Y
Ingals E Fletcher Chicago
Little J Bloomington Ill, Love I N St Louis, Mo, Long, F A, Madison Neb
Maxwell J B Mt Carmel, Ill
Newman A I Newark N J, North, Lucian G, Tecumseh, Mich
Osler William (2) Baltimore, Md
Paquin Paul St Louis Mo Philips Ferdinand Philadelphia, Pa, Pleak S M Keokuk Iowa
Reed R Harvey Columbus Ohio
Saunders W B Philadelphia Pa Stein O J Chicago, Smith Frank Trester Chattanooga Tenn Schering & Glatz New York, N Y, Sattler Robert Cincinnati Ohio

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ADDRESSES

MEDICAL EDUCATION IN AMERICA, ITS PAST, PRESENT AND FUTURE

Opening Address delivered at the Northwestern University Medical School Chicago Oct 6 1896

BY WINFIELD S HALL, PH D , M D
PROFESSOR OF PHYSIOLOGY

One can not give much of the history of medical education in America in a brief paper At most one can show the effects of certain forces which have been in operation, and indicate some of the landmarks along the line of development

All manifestations of life, whether the life of a single cell, of a person, or of a nation, are modified by the environment So strong is this modification and so faithfully do living things follow the changes of the environment, that they may justly be said to be its product

The educational institutions of a nation are manifestations of its life The facilities and equipments of these institutions are organs of the State, which perform the function of developing citizens From these premises it follows that educational institutions are modified by, in fact, are a product of, the environment

Another law of life is Community of environment leads to harmony of structure and function, and so we find that the institutions of a nation must be in harmony with the spirit of the nation, because developed under the influence of the same modifying causes

If we admit that, in common with other manifestations of life, educational institutions are the product of evolution, then will we expect to find that these institutions present, in each country, certain peculiarities and that they are in harmony with the spirit of the nation with which they developed, further, we will find that the present condition of these institutions must be the result of factors active in the past, and the future condition will be the result of the factors at work in the present

In the light of these general principles, let us briefly glance at the past[1] and present of medical education in America with a view to forecasting its probable future

The first American medical college was not established until over one hundred and fifty years of English colonial life had passed into history During the whole period—longer by twenty years than all our subsequent history—there had been in the colonies only 3,000 or 4,000 practitioners of medicine, and of these only a little more than one in ten had received the degree of Doctor of Medicine from some European institution Of the remaining 90 per cent some held certificates of apprenticeship to one of the educated physicians, while the vast majority dispensed their nostrums among their neighbors with no legal recognition and no justification for their activities save the mere toleration of the community The first almost abortive attempt to regulate medical practice by law was made by New York in 1760, followed by New Jersey in 1772

In Philadelphia in 1752 was established the first permanent hospital in America, with Dr Bond as superintendent and several of his colleagues as associates The private students of Dr Bond received in the wards of this hospital the first clinic instruction given in this country

The Medical Department of the College of Philadelphia was organized in 1765, with Dr Wm Shippen as professor of anatomy and surgery and Dr John Morgan as professor of medicine This faculty of two was soon increased by the addition of Dr Adam Kuhn as professor of botany and materia medica and Dr Benjamin Rush as professor of chemistry Three years later New York City witnessed the organization of the Medical Department of King's College, now Columbia University, with a medical faculty numbering six A professor of anatomy, of chemistry and materia medica, of physiology and pathology, of midwifery, of surgery and of the theory and practice of medicine

Note the very important difference which existed in the organization of these two schools of medicine From the first surgery and midwifery were recognized in the New York college as of sufficient importance to be made full and independent departments, while thirty-seven years elapsed before surgery was separated from anatomy in Philadelphia, and, in the University of Edinburgh, after which our early medical schools were modeled, it was not until 1831, or sixty-three years after the organization of the New York school, that surgery was made an independent department Midwifery was still later in gaining recognition From the early decades of this century, however, the progress of specialization has been ever more and more rapid, until now the number of specialties represented in the average medical faculty shows a high degree of differentiation

But a more interesting phase of the history of medical education in this country is that which presents the varying requirements for graduation During the first thirty years of our national history seven medical schools were organized All of these schools pursued a similar plan, which is well stated in the following rules, in regard to the conferring of medical degrees adopted by the trustees of the College of Philadelphia July 1767

For a bachelor's degree in medicine —1 It is required that such students as have not taken a degree in any college shall, before admission to a degree in medicine, satisfy the trustees and professors of the college concerning their knowledge in the Latin tongue and in such branches of mathematics and natural and experimental philosophy as shall be judged requisite to a medical education 2 Each student shall attend at least one course of lectures in anatomy, materia medica, chemistry, the theory and practice of medicine and one course of clinic lectures, and shall attend the practice of the Pennsylvania Hospital for one year, and may then be admitted to a public examination for a bachelor's degree 3 It is further required that each student previous to the bachelor's degree, shall have served a sufficient apprenticeship to some reputable practitioner of medicine, and show that he has a general knowledge in pharmacy

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[1] For facts regarding the early development of medical institutions in America I wish to acknowledge my indebtedness to various publications on that subject by Nathan S Davis, M D

For a doctor's degree in medicine—It is required for this degree that at least three years intervene from the time of taking the bachelor's degree, and that the candidate be fully 24 years of age, and that he shall write and defend a thesis publicly in college, which thesis shall be printed and published at his own expense This scheme of a medical education is proposed to be on as extensive and liberal a plan as in the most respectable European seminaries, and the utmost provision is made for rendering a degree a real mark of honor, the reward only of distinguished learning and abilities

The full significance of the term *apprenticeship* may be more fully understood from the following paragraph from Dr Davis' address before the International Medical Congress in Philadelphia, in 1876

> It must be remembered that during the colonial period of our history, and for thirty or forty years subsequent to the achievement of our national independence, it was the universal custom for young men who entered upon the study of medicine to become regularly apprenticed to some practitioner for a term of three or four years, during which time the preceptor was entitled to the student's services in preparing and dispensing medicines, extracting teeth, bleeding and other minor surgical operations, and when more advanced in studies, in attending on the sick, as a return for this he was obliged to give the student detailed and thorough instructions in all branches of medicine Many of the more eminent practitioners frequently had several students in their offices at one time, constituting a small class, who were drilled as regularly in their studies as they would be in college In some instances the term of apprenticeship was extended to six or seven years, and was made to commence at the early age of 15 or 16 years All these customs were brought by the immigrants from the parent country, and their perpetuation here was rendered more necessary by the sparseness of the population and the difficulty of access to medical schools In the midst of such customs, and at a period in the world's history when railroads, steamboats and other means of speedy transit were unknown, it was entirely reasonable that the first idea of a medical college should be to furnish means for a rapid review of the several branches of medical science, aided by such experiments and appliances for illustration as could be commanded, and the whole concentrated into as small a part of the year as possible The idea of the founders of medical schools, both in Great Britain and in this country, was to make them *supplement*, but not *supersede* the work of preceptor and the medical apprentice By combining several preceptors, each eminently qualified in some one department, in a college faculty, with access to anatomic rooms, chemic laboratory and hospital, all the branches of medicine then recognized could be very well reviewed in the form of didactic instruction, in five or six months of the year

From these quotations and from the history of the early development of these institutions, it is evident that the fathers of medical education in America planned more broadly than their successors were able to execute It was expected that a youth of 16 to 18 years would enter upon an apprenticeship of three to five years, would take one course of lectures at a college, receive the degree of Bachelor of Medicine, and return to practice under the guidance of his preceptor, where he could continue his studies at the bedside while assuming greater responsibilities than were possible as an apprentice After three years he could return to the college for a second hearing of the courses of lectures, for the preparation of his thesis and for his final examinations, after which he would be rewarded with the degree of Doctor of Medicine

The plan of conferring a degree of Bachelor of Medicine followed by the degree of Doctor of Medicine only after the candidate has reached greater maturity and has demonstrated his ability both in practice and the composition and defense of a creditable thesis, is still followed by the medical schools of some of the European states, and with the most salutary effect upon the standing of the medical profession The conditions which existed in America during the early part of our national history made this excellent plan impracticable The few schools could not prepare a sufficient number of Doctors of Medicine to supply the demand of a rapidly increasing population Once the responsibilities of medical practice were assumed by the Bachelor of Medicine, these responsibilities were with difficulty and, therefore, infrequently laid aside for the second course of study leading to the second degree And so it transpired that the plan was abandoned in America and the Bachelor's degree was abolished

The revised regulations adopted by the trustees of the College of Philadelphia, Nov 17, 1789, were in substance as follows

1 No person shall be received as a candidate for the degree of Doctor of Medicine until he has arrived at the age of 21 years and has applied himself to the study of medicine in the college for at least two years Those candidates who reside in the city of Philadelphia or within five miles thereof, must have been the pupils of some respectable practitioner for the space of three years, and those who may come from the country and from any greater distance than five miles, must have studied with reputable physicians there for at least two years

2 Every candidate shall have regularly attended the lectures of the following professors, viz , of anatomy and surgery, of chemistry and the institutes of medicine, of materia medica and pharmacy, of the theory and practice of medicine, the botanical lectures of the professor of natural history and botany, and a course of lectures on natural and experimental philosophy

3 Each candidate who, by virtue of a preliminary test, shall receive the approval of the medical faculty, shall then be admitted to a public examination before the trustees, provost, vice provost, professors and students of the college, after which he shall offer to the inspection of each of the medical professors a thesis written in the Latin or English language (at his own option) on a medical subject This thesis, approved of, is to be printed at the expense of the candidate and defended from such objections as may be made to it by the medical professors at a commencement to be held for the purpose of conferring degrees on the first Wednesday of June each year

BENJAMIN FRANKLIN,
President of Board of Trustees
WILLIAM SMITH,
Provost of the College and Secretary of Board of Trustees

This action, inaugurated by the oldest and most influential of the American medical colleges was rapidly followed by the others, so that medical education instead of covering a minimum period of seven years, was reduced to a minimum of four years, which consisted of two years of apprenticeship followed by two years of lectures and clinics, the second year being a mere repetition of the first This action participated in by one of America's greatest and wisest men reduced to one-half the requirements for the doctor's degree however, it resulted in the production of better prepared young medical men, because it produced Doctors of Medicine fitted for their work by two or three years of apprenticeship and two years of college and hospital work in the place of Bachelors of Medicine, who had only received one year of college and hospital work Subsequent history has shown that this change of plan was rather a stroke of diplomacy than act of statesmanship, for we are still suffering from the effects of this precedent But we can not complain, for this was a simple adaptation to the environment From that day medical education in America has been a peculiarly American institution, following every indication of the environment

With the rapid opening up of new territory, the influx of immigrants and the founding of new cities came increased demands for practitioners of medicine The new centers of population west of the Alleghenies were not content to patronize the well-established schools in the East, but, prompted by local pride, established new schools of medicine in every promising city of the Northwest territory The result was, that though there were only five medical schools in operation in 1810, the thirty years next following that date witnessed the organization of twenty-six new schools—a greater number than the whole German Empire now possesses Though some of these new schools were in the Eastern States, most of them were in the West and South From 1840 to the celebration of the centennial of our national independence, a period of thirty-six years, forty-seven more schools were organized Some had for various reasons been discontinued, so that there were only sixty-three in active operation in 1876

But during these sixty-six years of rapid increase in the number of medical schools, certain factors were at work to further debase standards of medical education The course of study as first planned provided instruction in botany, zoölogy, physics and chemistry, and presupposed a thorough knowledge of the Latin language

It will be remembered that Philadelphia College abandoned the requirement of a Latin thesis when they abandoned the preliminary degree of Bachelor of Medicine in 1789 The medical department of the University of Pennsylvania followed its example three years later The University of Pennsylvania made botany and zoölogy optional The colleges generally were ready in their response to this relaxation, and we find that during the first half of the century the candidate for entrance upon medical study was acceptable if he could read and write his own language, and that during the medical course no time was devoted to botany, comparative anatomy, physics or any subjects that make any part of a liberal education The college term was shortened to twelve or sixteen weeks, but still worse than this the term of preliminary study in the office of a physician had become merely nominal It was possible for a young man from the shop or farm, whose education represented what he had gleaned in a few winter terms of school and a few months as a busy practitioner's office boy and coachman—with the privilege of reading in the doctor's books at odd hours—it was possible for a young man, with such a preliminary training, to attend two winter terms of twelve to sixteen weeks each, hearing the same lectures and attending the same clinics the second year as the first, to receive the degree of *Doctor of Medicine*, which carried with it the license to practice anywhere in the country This pitiable condition represents the lowest ebb tide of medical education in America The weakest features of the condition have been pictured

A redeeming feature is that even during this period there were many hundreds of members of the medical profession who were men of the highest natural endowments and who had spared neither time nor money in thoroughly equipping themselves for the most efficient work in their chosen profession Their contributions to medical literature were notable they usually occupied prominent positions upon medical faculties The white-haired veterans upon the medical faculties all over the country represent this class They have labored from the first for higher standards of education Through colleges, through medical societies and through their pens—in the journals and in their text-books—they have given the best energies of their lives to the work of keeping the medical profession in harmony with the spirit of advancing standards

We have traced briefly the history of medical education in America until about the middle of this century We must not make the mistake of supposing that this was the only field of education that had suffered a lowering of standard during this period of our national history The equipment of members of the other professions was no better than that of the medical profession Colleges, universities, schools of law, medicine and theology had sprung up all over the newly opened territory of our country They were, in a vast majority of cases, beautiful exemplifications of Paul's definition of faith "The substance of things hoped for and the evidence of things not seen" But the faith of the new nation has been justified The things hoped for have begun to materialize and the things which were at that time not seen have begun to come into evidence A reaching up after higher standards may be seen in the plans of all the educational institutions of the country

If we look for the factors at work during these two distinct periods of the development of our educational institutions, we will find them in the environment—in society As a child takes especial pride in the mere number of dolls, marbles, or other playthings, so a young society counts its numbers, and sums up its quantities of everything Young cities vie with each other in the number of inhabitants, number of factories, number of schools Young schools vie with each other in the number of pupils the number of instructors, the number of books in their libraries The question of the quality of these several possessions or appliances is one which is propounded later in the development of the individual or of the state

So while we in our buoyant youth were adding millions annually to our population, while we were organizing States, founding cities, building thoroughfares for traffic, we were establishing institutions of learning, and these nascent institutions possessed all of the quantity-loving attributes of youth

During the last half of this century the spirit of progressive evolution has actuated our educational institutions But progressive evolution is possible only in an environment which puts a premium on excellence of quality The greater this premium is the more sharp the competition will be and the more severe the struggle for existence The fittest will survive, the less fit will become secondary, then subordinate, then extinct

One of the first marks of stability in our forming society was the premium which it placed upon real merit in members of the learned professions The best equipped lawyers and the best equipped doctors of medicine received national recognition, the ambitious youth, hoping for a position of honor in his profession, knowing that in the struggle for recognition the fittest would win, sought the best preparation at his command This was the paramount factor in the evolution—the natural selection of the fittest by society But there were several secondary factors Most important among these was the effort which leading members of the profession had made to raise the standard of education Before society passed beyond the quantity-loving phase of its development these efforts of the veterans of medicine were fruitless Now the gates to advancement were open Two factors have been most potent in this improvement First, the influence of *medical societies* One of the most influential of these is the American Medical Association organized in Philadelphia, in May, 1847 Our Dean, Dr N S Davis, was one of a committee of seven appointed at the National Medical Convention in New York May, 1846 The report of that committee, presented and adopted the following year begins as follows

> Whereas, The medical convention held in the city of New York in May, 1846, has declared it expedient for the medical profession of the United States to institute a national medical association, and, inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the views and aims of the medical profession in this country, must have a beneficial influence and supply more efficient means than have hitherto been available here, for cultivating and advancing medical knowledge, for elevating the standard of medical education and for promoting the usefulness, honor, and interests of the medical profession, therefore, be it
>
> *Resolved*, That the members of the medical convention held in Philadelphia in May, 1847, constitute a national medical association to be known and distinguished by the title of the "American Medical Association" [Medical Education, Davis, p 142]

This Association has always been a friend of advancing standards The more recently founded American Academy of Medicine is also exerting a stimulating influence

The two factors of progress already discussed paved the way for the third and made its success possible This third factor was the founding of schools adequately equipped to furnish young men with a thorough training in scientific medicine This entailed an extension of the faculty-roll, the furnishing of expensive laboratories, and of increased facilities for clinical instruction It involved the extension of the period of study and the arrangement of the studies in a graded course The Chicago Medical College, founded in 1859, was the first school oganized upon this basis

Its success from the first demonstrated the fact that the times were ripe for advance Other schools fell into line Standards rapidly advanced Ten years ago the best schools required three years of eight months each Today the best schools require four years of eight or nine months each The work in these schools is strictly graded and consists largely of laboratory work in the first two years and of clinical work in the last two years The actual time spent in college is now four or five times as long as the time spent by our grandfathers and the grading of the course and the introduction of laboratory and clinical work makes it probably eight or ten times as effective

The youth can not now leave the field or the shop and go at once to the medical school He must have had a year of Latin, and so much of mathematics, and of natural science as would represent at least two years of work

But these are the minimum requirements, students are urged to complete in a college or in a university courses covering three or four years in the modern languages and mathematics and the physical and biologic sciences Every year shows an increasing proportion of students in the professional schools, who have had at least two or three years of a college course Johns Hopkins University alone requires, for matriculation in the medical school, a baccalaureate degree from a recognized institution

Ten years ago the most optimistic friend of advancing standards would scarcely have anticipated that in 1896 all the reputable schools of medicine would require of candidates for the Doctor's degree, four years of medical study after a fair preparation and would be making laudable efforts to provide respectable laboratory and clinical courses But such is the condition of medical education at present

The spirit of progress is dominant Society and the state want better equipped men in the learned professions The recognized men in all of these professions are using their influence to raise the standards of professional education A young man who aspires to a position of repute in one of these professions is ready to comply with the increased requirements in time and hard work, in order to give himself the best possible equipment

Recognizing the presence and force of these factors of progress, the writer should not be adjudged too optimistic if he prophesies that in 1906 A D all reputable and recognized medical schools in America will require of a matriculate that he present a baccalaureate degree from a college or university, or credentials covering at least four years of language, four years of mathematics one year each of chemistry and physics, and two years of the biologic sciences A student so prepared would require four years for his medical course and should be given the baccalaureate degree at the end of his first year in medicine

But several of the larger universities offer thorough courses in the comparative morphology of vertebrates, comparative mammalian osteology, special and comparative embryology, histology, general and comparative physiology and the special physiology of nutrition A student with a preparation covering this field will usually have received the baccalaureate degree Such a candidate should require but three years for his college studies in medicine

What change will be made in the medical course?

There will be no increase of the quantity of work required of the student, but there will be a very great improvement in the *quality* of work done Certain courses will be required of all students, certain courses will be elective The advanced work will be done in the elective courses Each of these courses will have a special equipment If the classes are not too large, they will meet periodically in the seminar rooms for the reading of prepared papers or the discussion of new literature Each professor will take pride in securing for the library a good representation of the books and journals in his special field Journal clubs in medicine, surgery, pathology, etc, will be organized by the students Each of the more influential institutions will need a journal for the publication of the products of its own research With such a preparation for medical study and with such opportunities, may we not hope that in the near future the degree of

Doctor of Medicine will signify all that was planned for it by our forefathers in Philadelphia nearly 140 years ago, viz "This scheme of a medical education is proposed to be on as extensive and liberal a plan as in the most respectable European institutions, and the utmost provision is made for rendering a degree a real mark of honor, the reward only of distinguished learning and abilities"

THE PREVENTION OF PELVIC DISEASE

Annual Address on Gynecology and Abdominal Surgery
Michigan State Medical Society June 4, 1896

BY REUBEN PETERSON, M D
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GRAND RAPIDS MICH

For some years past the greater portion of the time of those who have given their attention to the diseases of women has been devoted to the development of more strictly surgical problems That the greatest good has resulted from these investigations no unprejudiced mind will deny As Americans we can be justly proud of the surgical discoveries and achievements of our gynecologists, by means of which lives of thousands of women have been saved or have been rescued from invalidism Nor is it to be wondered at that surgical abuses should have crept in with the discovery that by attention paid to the laws of asepsis the peritoneal cavity could be invaded with impunity The performance of unnecessary operations, the removal of organs which might have been saved are but incidents in the mighty advance which has been made The evils resulting from the surgical attempts of those whose preliminary training was insufficient have been more than counterbalanced by the good resulting from the knowledge placed at the disposal of every practitioner It is extremely popular to sneer at gynecology and, making much of its errors, to forget the debt the profession owe the tireless workers in this department Modern pelvic pathology has been placed upon a firm basis only by the multiplicity of the abdominal sections, so deplored by some The mistakes made by the pioneer surgeons have been recognized and profited by and we are entering upon a new era of gynecology and abdominal surgery Pelvic pathology and surgery go hand in hand and true conservatism is the order of the day

It is but a step to the higher realm of preventive medicine as applied to diseases of women In the midst of scores of papers upon surgical technique one has appeared now and then which mildly urged that diseases curable only by surgical interference could have been prevented had suitable means been instituted at the proper time, but these efforts have for the most part been unheeded

The cause and prevention of pelvic disease is a subject of interest both to the gynecologist and the general practitioner The former from the abundance of material at his command is in the best position to study cause and effect in their relation to diseases coming under his specialty It is to him we look for the application of the discoveries of modern physiology, hygiene and bacteriology in the prevention of pelvic troubles But the carrying out of these preventive measures will necessarily fall to the lot of the general practitioner To his care is intrusted the physical well-being of the growing girl, the wife, the mother and the woman past the menopause To him do they look for counsel His responsibility is great for upon his advice does the future welfare of the nation largely depend It is time for the profession and the laity to understand that diseases of the female generative organs in a majority of cases are preventable The popular opinion that women are born to suffer may be denounced as false With scarcely an exception the origin of pelvic troubles can be traced to some transgression of nature's laws committed wilfully or through ignorance If it be due to the latter the family physician must in a great measure be held responsible His part as adviser should be active, not passive, if pelvic disease is to be controlled by wise prophylactic measures The causes of pelvic diseases to which I would invite your attention are

1 *Imperfect development of the sexual organs* —At no period of life will prophylactic measures against pelvic disease prove of so much avail as during the few years prior to puberty Yet at no time are they so much neglected The girl is allowed to approach womanhood with no thought bestowed upon the needs of her developing generative apparatus Unless perchance menstruation be developed beyond the expected time, when the physician is consulted, perhaps too late to entirely rectify the conditions resulting from neglect Pelvic disease due to imperfect development of the sexual organs is very common How often do we meet with infantile uterus, small convoluted tubes, anti-flexed and elongated cervix Uterine and ovarian dysmenorrhea and the various reflex neuroses are common accompaniments and doom the sufferer to a life of invalidism unless relief can be obtained

Oftentimes we may look for the causes of the conditions enumerated in faulty methods of education The growing girl who should spend most of the time in the open air with never a care in the world, is closely confined for hours in a school-room, the air of which is so vitiated as hardly to be capable of supporting life Here she may be found, ambitious to excel in her studies, poring over her books with back bowed and chest contracted If the remainder of her time were spent in recreation the evil effects of crowded school-rooms might be counteracted, but such, as a rule, is not the case The parents are ambitious that their daughter shall take high rank in her studies and that accomplishments such as music and painting be acquired at an early age Hence the girl is urged to still greater mental efforts Thus the nervous force so needful at puberty for the establishment of the menstrual function, is wasted in the acquisition of what may be considered trifles, compared with perfect health It is here that the family physician's advice will be of inestimable value He can urge apon the parents the necessity of healthy nervous and muscular systems for the proper development of the sexual organs He should demand that the school duties be lightened and the hours of recreation in the open air be lengthened By carefully instructing the mothers on questions of diet, he will be able to prevent the evils resulting from malnutrition so common in girls from 10 to 15 He will find the parents only too anxious to coöperate with him They err only through ignorance of what is best for their children

The false modesty about all matters relative to the generative organs which prevents the mother from explaining to the girl what she may expect [illegible] berty is to be deprecated The [illegible] of [illegible] dical profession have a great [illegible] task [illegible] em if they are to instruct [illegible] through the mothers. Many false notions must be swept away if we are to arrive at a state of things when modesty, not prudery, shall reign supreme. It is inconceivable why a fundamental law of nature, whereby the species are perpetuated should be treated as such a mysterious, nay, almost sinful matter. When the time comes that the young girl can have the functions of her generative organs explained to her without danger of having a hysteric convulsion, we shall have accomplished a great deal. When she knows as much about her uterus and ovaries as she is taught about the stomach and liver, then she will be in a position to put into practice those prophylactic measures necessary to the maintenance of perfect health.

2. *Gonorrhea.*—It is exceedingly difficult to estimate what proportion of the inflammatory affections of the uterus, tubes and ovaries are due to gonorrhea. But that the percentage is high is apparent even to the most superficial observer, and the more the disease is studied in women and the greater the improvements in bacteriology, the higher is to be found this percentage. The question before us is not, however, a pathologic or bacteriologic one, for the lesions produced by gonorrhea in the female are well known. One reason for the prevalence of gonorrheal disease is that its gravity has never been correctly estimated by the laity or the profession. And this in spite of the teachings of Noegerrath, who, over twenty years ago, demonstrated that many so-called cures in the male are fallacies. This accurate observer proved conclusively that in many instances a latent gonorrhea existed, which could under certain circumstances be communicated years after the acute infection. It has required over twenty years of discussion for the profession to acknowledge the truth of Noegerrath's statements, and even now the popular opinion in regard to the disease shows that the profession have failed to impress the importance of these conclusions upon their patients. Is it not a common experience to find the young man who consults us for an acute gonorrhea, treating it as a most trivial affair? He thinks he has been unfortunate, that it is all. If it were explained to these young men that gonorrhea is something more than a "cold," that the disease, no matter in how light a form it exists, may produce the most serious results in the male genito-urinary organs, they would perhaps think twice before exposing themselves to the risk of infection. If it were generally known that gonorrheal disease was the cause of sterility and a long train of symptoms entailing the utmost misery upon the innocent wife, would the disease be looked upon as such a trivial affair by the laity? Let the profession do its duty and we shall soon see a change of opinion in the community. The world has suffered enough from the prevailing idea that a young man must sow his wild oats. If our boys were properly instructed in regard to the evils resulting from venereal disease, we should see fewer wild oats of that description. Let the parents be enlightened on what may befall their daughters if married to men suffering from latent gonorrhea. Let the father demand from the prospective son-in-law not a full pocket-book, but a clean bill of health, and there will be fewer unhappy homes. It is only by work in these directions that any headway can be made in the effort to eradicate gonorrheal disease. Closing the houses of prostitution will not do it, for the inmates are simply driven elsewhere. Licensing the houses has proved a failure as far as decreasing gonorrheal disease is concerned. The only hope lies in the thorough dissemination of knowledge of the evils resulting from the gonorrheal poison and in a direct appeal to the justice and honor of our young men.

3. *Lacerations due to childbirth.*—Thanks to the teachings of some of our American gynecologists, the profession is alive to the importance of lacerations of the cervix and pelvic floor as factors in the causation of displacement and disease of the pelvic organs. The attention of physicians should now be directed toward the improvements in their methods of repairing these lacerations. The gynecologist not infrequently obtains the history of a primary repair of a ruptured perineum which shows no trace of the obstetrician's work. Usually the failure of the operation has been the result either of want of knowledge how the stitches should be placed or a lack of asepsis either during or after the suturing. When more than one or two stitches are required it is best that the patient should be under the influence of an anesthetic. It is almost impossible to obtain proper coaptation of the torn edges of the perineal muscles when the patient is in pain and struggling. Perineal tears, as a rule, involve the muscles at the sides of the vagina. Unless the sutures be placed accordingly a "skin perineum" with a resulting prolapse will be the result. Silk or silkworm gut sutures thoroughly sterilized should be used. Catgut should not be employed because of the danger of subsequent infection. The patient should be examined within a month after delivery for the purpose of detecting any lacerations of the cervix demanding repair. Any such should be attended to not only for the immediate effect upon the uterus by the promoting involution, but also for the purpose of avoiding subsequent eversions, erosions and possible malignant disease.

4. *Sepsis following childbirth and abortions.*—The dissemination of knowledge among the laity as to the etiology of this disease and the responsibility laid at the door of the physician when a death occurs, has obliged every practitioner to introduce into his obstetric practice some sort of antiseptic technique. While simple habits of cleanliness on the part of the accoucheur has greatly decreased the mortality from puerperal sepsis there is still a vast amount of pelvic disease which has its origin in septic infection contracted during or after childbirth or abortion. This milder infection gives rise to septic endometritis, metritis, tubo-ovarian inflammations and pelvic peritonitis. One not infrequently hears a practitioner remark that since the application of the principles of antisepsis to his obstetric practice he has not lost a case from septicemia. This is commendatory, but one can not help wondering how many cases of mild sepsis he has had, with slow convalescence and subsequent suffering from pelvic disease. It has been demonstrated that the uterus and vagina becomes infected in the same way that any wound does. The former, however, is more susceptible to septic influences because of the favorable soil it offers for the development of pathogenic microörganisms.

Yet ordinarily the accoucheur does not take the same care in the sterilization of whatever is to come in contact with the parturient tract as he does before an amputation of the breast or leg. There is the greatest need for reform in the ordinary obstetric technique. The hands and arms are not rendered aseptic by one washing with soap and hot water or by scrubbing with a brush which from constant use and nonsterilization is reeking with germs The immersion of the hands for a few seconds or minutes in an antiseptic solution renders them far from sterile The family jar of vaselin commonly offered the physician as an unguent is as septic a material as could possibly be used upon the examining finger, but it is often employed by the physician without the slightest conception that by its use he is endangering his patient The external genitals of the lying-in woman are not aseptic until so rendered, yet in how many cases are examinations made without these precautions being taken These are but samples of the faulty technique, which is the cause of sepsis in varying degrees of intensity

The minute attention to details of surgical cleanliness, which is so essential to the proper healing of wounds should be used in the normal case of confinement if we are to avoid the milder forms of sepsis which may cause subsequent suffering The physician must not refrain from taking these precautions from the idea that childbirth is a normal physiologic process and should not be interfered with Childbirth is a normal process, but nature did not anticipate or provide against the introduction of septic material by the physician It is time that members of the profession awake to the fact that they and they alone are in most instances responsible for the mild sepsis which prolongs the convalescence of the lying-in woman

What has been said in regard to sepsis after childbirth may be applied even to a greater extent when the uterus is emptied prematurely It will be found in many instances that the origin of pelvic trouble can be traced directly to a former miscarriage It is unnecessary to enumerate the reasons for this It would be much more profitable to discuss the question of what measures should be adopted to stop the practice of criminal abortion which is alarmingly frequent The abortionist is to be found in every community and he plies his trade in the most bare-faced manner, even making use of the daily papers to advertise his business It is doubtful whether much can be done toward the extermination of this class of human reptiles who with their dirty fingers and instruments do more harm in a community than does smallpox As a rule the law only reaches them when a death has resulted at their hands, and then conviction is exceedingly difficult They are usually doctors debased by drink or drug habits and really belong to the defective criminal class

Unfortunately, physicians are acquainted with another class of abortionists made up of so-called respectable members of the profession We have been called to attend and have saved the lives of their victims from the effects of flooding or sepsis only by the greatest exertion It is our fault if we know of these crimes and refrain from action By his own acts the abortionist for the sake of money has abdicated his position among the honorable members of his profession Let us scourge him from our societies and by so doing show our disapproval of his unprofessional conduct Until this is done he will continue to disgrace us and cast shame upon an honorable calling

Above all things let us be honest and truthful with ourselves and our patients when they apply to us for the relief of certain conditions Let us not juggle with our consciences and prescribe something with the assurance that it will cause menstruation to appear, if pregnancy has not supervened When they come to us with the old, old story and request that we help them out of their difficulties, explain to them the enormity of the crime they ask us to commit and not refer them to some one who will give them the desired relief Let us show them that our refusal is not based upon fear of detection, but upon high moral grounds which are a part of our much abused code of ethics It is proof enough that the profession has been negligent in its instruction in this matter of criminal abortion, else patients would not unblushingly insult us so frequently by this request

It also devolves upon us to describe the evil results which may accrue from a miscarriage, even if death does not result from a septic instrument The chances of resulting sterility must not be forgotten The physician is called upon to enlighten the patient as well as to refuse to accede to her request When this is done conscientiously, with no fear of losing the subsequent patronage of the patient, then will come a time when the commmunity will regard this question of induced abortion is its true light and these sins against nature with all the attending suffering will become less frequent

Who can predict the mighty advances in gynecology and abdominal surgery which the one hundredth anniversary of the American Medical Association will reveal? During the past half century these two branches of our science have been revolutionized, chiefly, I am proud to say, through the genius and industry of American physicians It is not beyond the realms of possibility that these same qualities directed toward the solution of the problems of preventive medicine will again revolutionize these departments during the course of the next fifty years

Pythian Temple

ORIGINAL ARTICLES

THE NECESSITY OF GRANTING PRIVILEGED COMMUNICATIONS TO THE MEDICAL PROFESSION IN THE STATE OF ILLINOIS

Read before the Medico-Legal Society of Chicago Dec 5 1896

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CHICAGO ILL

Hippocrates, the sage of Cos, 460 years B C, demanded, as you well know, of the students in his asclepia an oath in which, among other things, they swore that "whatever in connection with professional practice, or not in connection with it, I see or hear, in the life of men which ought not to be spoken abroad I will not divulge, as reckoning that all such should be kept secret " From the time of this great Grecian physician until today the great principle embodied in this portion of his oath has been the principle actuating all good physicians in their daily life and conduct He knew, as every physician of today knows that so close, so intimate, so privileged are the communications between patient and doctor that they should be kept as inviolable secrets He knew, as we know, that there is in almost every household a closet and a skeleton, hid carefully from the eyes of ordinary men, but easily accessible to the physician, and this must not be disclosed He knew, as we know, that in the daily inspection of our patients we see stigmata, in the boldest figures as plain as the writing on the walls of Belshazzar's banquet hall, consequences of the violation of nature's laws, that must not be proclaimed from the housetops He knew, as we know, that when a woman comes to us for relief from some discomfort and our microscope reveals the fact that she has not been leading the life that her position in society demands, that she is, indeed, no better than a prostitute, although the daughter of a highly esteemed family, that this information thus obtained is privileged, and that no advantage can possibly come from its publication It is our duty to lead her from the errors and dangers of her life, but not to disgrace her and her family by the publication under any circumstances of this information thus obtained And he knew, as we know today, that there are hundreds of ways in which information comes to physicians, wrung out of their patients by their conscience-stricken condition, wrung out of patients by the fear of death, obtained by simple, careful scientific inspection, placing us vastly closer to the innermost recesses of the people than either the clergy or the lawyers can ever hope to attain These communications are not in all communities privileged, either as to the clergy or the doctors, because, I presume, that the laws are made, not by the doctors, not by the clergy, but by the lawyers For, in common law, communications between client and legal advisers are privileged, but not similar communications between clergymen, physicians and clients They tell us that these communications must not be privileged because, if so, crime will be much more difficult of detection This argument may have been a very adequate one in olden times, but certainly today it is altogether insufficient

In England, priests and physicians have no privileged communications In France they have, and I can assert, I think, without fear of contradiction, that the detection and punishment of crime is as prompt and sure in France as in England

In the United States, twenty-one States and Territories regard these professional confidences precisely as they are regarded in France, as privileged communications, and these States and Territories are Arizona, Arkansas, Colorado, California, Indiana, Idaho, Iowa, Kansas, Montana, Michigan, Minnesota, Missouri, Nevada, Nebraska, New York, Ohio, Oregon, Utah, Washington, Wisconsin and Wyoming I think I may safely say that the machinery for the conviction and punishment of crime operates just as well and as promptly in these States and Territories as in their less fortunate sisters

It might be interesting to consider the subject matter of some of these laws in other States

In California the law reads "A licensed physician can not without consent of patients be examined in a civil action as to information acquired in attending patients which was necessary to enable him to prescribe or act for the patient" In Colorado, it is similar to that of California

In Indiana the law reads "Physicians are incompetent witnesses as to the matters communicated to them as such by patients in their professional relations" The law in Iowa is much the same as in Indiana In Kansas the law is much the same as in California

In Michigan the law reads, "No person duly authorized to practice physic or surgery shall be allowed to disclose any information which he may have acquired in attending any patient in his professional character, which information was necessary for him to prescribe for such patients as a physician or do any act for him as a surgeon"

In Minnesota the law reads "A regular physician or surgeon can not, without the consent of his patient, be examined in a civil action as to any information acquired by attending the patient which was necessary to enable him to prescribe or act for the patient" The Missouri law is similar to that of Michigan

The Nebraska law reads "No practicing attorney, counsellor, physician or surgeon, minister of the gospel, or priest of any denomination shall be allowed in giving testimony to disclose any confidential communications properly entrusted to him, to enable him to discharge the functions of his office according t the usual course of practice or discipline"

In New York the law reads "A person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, but gives the right of waiver to the patient or person confessing"

In Ohio it is enacted that, "A physician shall not testify concerning a communication made to him by a patient in his relation as adviser to his patient, but the physician may testify by the expressed consent of his patients, and if the patients voluntarily testify the physician may be compelled to testify on the same subject"

In Wisconsin the enactment is that, "No person duly authorized to practice physic or surgery shall be compelled to disclose any information which may be acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as his physician or to do any act for him as a surgeon"

It is very surprising that the great State of Illinois, with its medical colleges and hospitals in the very first rank of such institutions in the world, with so many practitioners of international reputation, and with laws regulating public health, and great medical charities that are not surpassed, should be in the rear-guard of States in this important matter, and it is also surprising that there are so many well informed physicians who are not aware of the position the State occupies

In France the Penal Code, Art 378, directs that if physicians, surgeons, officers of health, as also apothecaries, midwives and all other persons depositaries of secrets, either through their condition or profession shall reveal these secrets (except in cases where the law obliges them) they shall be punished with fine and imprisonment, and in another place it is clearly indicated that the exception has reference to crimes that put the safety of the state at hazard The adjudications under this law have been various, seemingly dependent upon the judicial officer A Dr St Pare, surgeon in the French navy, in the case of a duel in which he acted as surgeon, for refusing to answer the question, "Are you in attendance on M Giraud, wounded some days since in a duel? Where is the wound situated and for how many days will he be incapacitated from pursuing his ordinary avocation?" was fined 150 francs

Some points have been raised in these several States that are of interest in this connection One was as to whether physicians shall testify after death of the patient, as in cases of testamentary capacity, insurance cases, etc If it had been always strictly interpreted it might cause some inconvenience and the court of appeals of New York has admitted that it might cause mischief

In Indiana in a similar case the court held that the legal representative of a patient might waive the privilege

In the people *versus* Kennuder, 119, New York, 585, it was held that the privilege does not extend the information as to the patient's condition, either mental or physical, gained by the doctor who is sent to make an examination of the prisoner's mental or physical condition in jail, provided the testimony does not include conversations with the prisoner or transactions in jail If the doctor simply testifies as to his opinion of a person's mental or physical condition as he saw him in his cell or court room the evidence is unobjectionable

In Michigan several cases have been argued upon the question whether if the patient states a certain physician attended him the physician can be put on the witness stand to contradict the patient as to this fact

In Brown *versus* Metropolitan Life Insurance Company, 65 Michigan, 306, this was not allowed

In New York, it has been further decided that if a party claims to exclude evidence as coming under this prohibition he must show the relations of a physician to the patient to have existed, and that the rule does not apply to criminal cases Moreover, the courts have seemed to rule that it is not needed to definitely prove the information to have been necessary to enable the physician to act as such, this being inferred by the relation of physician and patient Furthermore, the rule of evidence which excludes communications between physicians and patients must be invoked by an objection at the time the evidence of the witness was given

The penalty of the disclosure of confidential communications appears to be regulated by the general law Bishop on Rights and Torts, 1889, Sec 295 and 301 gives the spirit of the law as follows

"The doctrine that one who follows a command or permission of the law, is not liable to another, casually injured thereby, furnishes a wide protection to defendants in libel and slander But this principle covers in general only honest and careful utterances Sec 295

"We may add as the doctrine here to be considered, that whenever the law or any social duty which the law recognizes, permits or requires an utterance not thus privileged absolutely, it is conditionally so, that is, if cautiously and circumspectly made so as not to inflict needless injury, in other words, if it is honest and without malice—otherwise it is not protected"

As illustrations are given A letter written by a man to his wife's mother, cautioning her against one she contemplated marrying, was in an English jury case, ruled by Alderson B to be privileged (Todd *versus* Hawkins 8, Car and P 88) But in a Massachusetts case (Joannes *versus* Bennett, 5, Allen 169) a like letter from a pastor to a girl was ruled otherwise as he was not related to her See also in N Y Byam *versus* Collins, 39 Hun 204

It is not likely that any court would rule a communication or consultation for criminal purposes to be privileged In New York this has been specially ruled against Hewitt *versus* Prime, 21 Wend 79 Hageman on Privileged Communications

I am very glad the Medico Legal Society of Chicago, composed as it is of representative members of the medical as well as of the legal profession, has taken up the consideration of this important question and I believe they fully agree with me that the State of Illinois should as speedily as possible be placed in the role of States that makes the communications of physicians, lawyers and clergymen privileged communications, and we sincerely trust, at least, that there is no medical man in this association who would not prefer to sacrifice his personal liberty rather than violate the secrecy or implicate the character of his patients and under no circumstances permit professional secrets to be dragged into publicity in a law court

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A RAPID AND SUCCESSFUL TREATMENT OF HERPES ZOSTER

Read in the Section on Dermatology and Syphilography at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta Ga May 5 8 1896

BY A H OHMANN DUMESNIL, M D
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Although herpes zoster is one of the effections of the skin which is of comparatively frequent occurrence and has been known ever since cutaneous eruptions were observed, there is no manner of doubt that many points connected with its etiology and pathology are still veiled in more or less obscurity It was not until quite recently that a consensus was arrived at in regard to its being a relapsing disease And, for this knowledge we must give the general practitioner due credit Without any pretenses to a special knowledge of cutaneous medicine, the country doctor has frequently had occasion to observe "shingles" occur a number of times in the same individual Such instances have been reported so often that the idea no longer prevails that one attack of herpes zoster confers immunity against subsequent attacks in the same individual Nevertheless, this was the opinion formerly held by the best observers and a reference to works on dermatology will show that it was generally accepted The cause of this no doubt lay in the fact that the patient either did not apply for relief when another attack came on or sought the services of some one else in the hope that this latter would be able to prevent a recurrence

Another idea which has prevailed is that the disease has a self-limited course, lasting from three to four weeks when spontaneous recovery takes place I have seen cases in which successive crops of vesicles have appeared for two or three months with breaking down of the lesions and ulceration Not only this but the ulceration would become phlegmonous and during all this time the neuralgic pains were of an intense character, to such a degree that opium and other sedatives soon became impotent Such a self-limitation is certainly one not to be desired and therapeutic interference is not only indicated but imperatively demanded by the exigencies of every case

It has been asserted by some good authority that no treatment will cut short the course of herpes zoster and that the best which can be expected from medication is to [illegible] neuralgic pain This is far from being either satisfactory or encouraging, and it would certainly be postively discouraging to those who have occasion to treat that dread condition—zoster ophthalmicus For it has been too often the case that an inability to arrest the process has resulted in perforation of the cornea and, not infrequently, destruction of the globe When the conjunctival surface is not attacked we are told that herpes zoster of the fifth nerve invariably leaves scars to mark the former location of the lesions, a dictum, which, to my mind, is a *non-sequitur* It is based on the fact that active interference has not even been attempted under the fallacious idea that the disease must be left to run its course I have always been in the habit of treating these cases rather energetically and my efforts have been awarded by excellent results Whether it has been merely a coincidence that such a short period of treatment was followed by recovery, or a peculiar circumstance that all were cases that would have recovered spontaneously in a few days I shall not stop to discuss The fact remains that a similar treatment in a number of cases was eminently satisfactory and I shall continue to use it until a sufficient number of failures declare themselves to demonstrate its inefficiency In principle, the method has nothing new to recommend it, in its application, however, it is characterized by some details, which will recommend it for simplicity and ease of administration The following are a few cases which occurred in my private and hospital practice, and which will serve to illustrate the points I wish to make

Case 1 —Charles W , photographer by occupation, aged 32, is of robust physique and is a prominent and active member of a gymnasium He exercises daily but is inclined to take on adipose tissue Some few days before I saw him he conceived a notion that his liver, bowels and other internal organs were not "working right" In order to remedy what he conceived to be his generally bad condition he made a concoction according to the formula furnished by some kind friend An examination of the receipt showed it to contain a very large amount of colchicum As a result of the ingestion of this mess the patient was violently purged and a repetition of the dose made him very feeble indeed The third day after taking the mixture an eruption of herpes zoster declared itself As soon as the vesicles appeared a slight itching and a marked neuralgia were manifest The next morning I saw the patient and the distribution of the eruption was about as follows Anteriorly, a patch of pin head sized vesicles about 1½ by 2 inches in size was located over the third intercostal nerve at a point corresponding to about the center of the clavicle Posteriorly, the eruption followed the course of the same nerve extending from about five inches to the right of the spinous processes of the vertebræ to the margin of the trunk and with an almost uniform width of 2 inches

The treatment ordered was to take thrice daily, after meals, the following pill

℞	Acidi arseniosi	gr 1 20	003
	Pulv piperis nigris	gr ij ss	15
	Ext gentian	q s	
M	Ft pil No 1		

These were ordered to be taken for ten days

Externally campho phenique powder liberally sprinkled upon absorbent cotton and applied to the eruption This dressing was to be repeated twice daily In three days crusts had formed and, on the fourth, the case was at an end, the neuralgia having completely disappeared

Case 2 —James C , a druggist, 36 years of age, presented himself for treatment of an intercostal neuralgia of the right side He complained of a marked neuralgic pain which had preceded the eruption some five days It was not the intensity of the pain that the patient complained of but the fact that the eruption was spreading At the time I saw him the outbreak consisted of a number of patches of the size of a silver quarter dollar distributed over the area supplied by the sixth intercostal nerve It extended from a point about six inches to the right of the median line posteriorly and about four inches from the median line anteriorly The vesicles were well formed and, in many places, two or three had coalesced

This patient was placed on the same treatment as Case 1, and in five days the cure was complete He was ordered to continue the pills for two weeks longer in order to avoid the possibility of a recurrence of the trouble Up to the present no reappearance of the trouble has manifested itself

Case 3 —Winston W , aged 17, a buggy boy in a livery stable appeared at my clinic with the statement that the eruption showed itself a week previously There was no neuralgia experienced before the eruption appeared, but when it did manifest itself neuralgic pains were felt The eruption appeared over the tract of the fifth intercostal nerve Five patches were present to the left and below the left nipple, three below the left scapula, one being very small The patient is of a highly nervous temperament, a slight tickling almost throwing him into convulsions, making him jump about in a grotesque manner and grasp anything or any one within reach and strike the object or person with his fists At the stable where he worked he was constantly subjected to this nervous excitement and this may have acted as a causative factor

The following treatment was ordered

℞	Acidi arseniosi	gr 1 30	002
	Pulv piperis nigris	gr j	06
	Ext gentian	q s	
M	Ft pil No 30		

Sig One pill after each meal

Externally -

℞	Pulv camphoræ	ʒij	8
	Bismuthi subnitrat	ʒiv	16
	Cretæ preparat	℥j	32
M	Sig Apply twice a day		

This powder was ordered spread on cotton as in the other cases and six days after the inception of the treatment the patient was cured No new vesicles formed subsequently, the pain had disappeared and no new attack has manifested itself since

Case 4 —Lydia C , a school girl 9 years of age has had recurrent attacks of herpes zoster every year She is a blonde, but appears well nourished She has recently suffered from imitative chorea but is now well of that trouble Her nervous system, however, is very susceptible to shocks of all kinds The present attack is the most severe she ever experienced It appeared some four days before she came to the clinic A large patch of closely aggregated vesicles was located on the left and posterior side of the neck Other patches occurred on the left shoulder, upper part of the left arm over the area supplied by the musculo spiral nerve The neuralgia was intense, being worse at night The child showed plainly the intensity of the neuralgic affection There was no zosterian fever present nor any history of such It would hardly exist in view of the fact that a marked neuralgia was present

The treatment in this case was the following

℞	Liq kali arsenitis	ʒss	2
	Vini ferri		
	Syr limonis	āā ℥jss	48
M	Sig Teaspoonful in water after each meal		

Externally The same powder was used as in Case 3 On the sixth day the pain had all disappeared as well as the eruption and there existed but a very slight superficial desquamation The patient was subsequently seen and the favorable condition continued

Case 5 —Oscar M , a laborer 64 years of age, applied at my clinic two days after the eruption had declared itself No antecedent trouble or present discomfort could be elicited beyond constipation No neuralgic pain was present nor had any been felt and no medicines had been taken In fact, no neurotic basis could be discovered as a possible cause of the eruption This latter consisted of a vesicular eruption, such as is characteristic of herpes zoster, extending along the level of the right twelfth rib from a distance of about two inches from the posterior median line over the abdomen, up to the umbilicus The vesicles were well marked, rather large, but with no tendency to coalesce The only subjective symptom complained of was an intense burning sensation at the site of the eruption The treatment ordered consisted of the following

℞	Liq kali arsenitis	ʒvj	24
	Vini ferri		
	Syr limonis	āā ℥iij	96
M	Sig A teaspoonful in water after each meal		

Externally Campho phenique powder was liberally dusted on coton and applied to the eruption twice daily Five days after the treatment was begun the eruption was all dried up and three days later no vestige of it remained The patient was ordered to continue the internal medicine until it was all taken and strictly enjoined to present himself should any new symptoms show itself He never reappeared

Case 6 —Daniel F , an engineer 36 years old, appeared four days after the eruption had occurred About two weeks previously he was treated for diarrhea He had been drinking alcoholic liquors freely His diarrhea subsided in two days and he was constipated The eruption consisted of isolated patches of vesicles over the tenth and twelfth ribs on the right side of the back He complained of some itching and of a neuralgic pain on the anterior portion of the trunk As the patient expressed it, "the pain stops at the middle line " The eruption had an irritated appearance

The treatment ordered was the same as in Case 5 Three days later some of the lesions were well, no new ones having appeared Five days later the pain was much less the lesions disappearing Ten days after presenting himself the patient was practically cured

Such is a brief outline of cases of herpes zoster seen by me in July, 1895 I have purposely chosen these, as the time which has elapsed since then has been sufficient to arrive at a positive conclusion as to whether the attack was definitely cured in each case It will be interesting to note whether recurrences take place or not So far I have noted none and I have been careful to keep them under observation What concerns us more directly is in reference to the treatment and I desire to incorporate in these views some experiences noted before and after the treatment of the cases which have been outlined above, more especially as regards some of the generally followed practices The cases which have been recited certainly sufficiently demonstrate that the opinion that herpes zoster can not be cut short in its course is a fallacious one and will not be referred to at any length

Some few points which will be noted in connection with the cases outlined are that, in the first case, arsenious acid seemed to act better than Fowler's solution I have found that the Asiatic pill is, on the whole, the best method of administering arsenic and its use may be prolonged for a much longer period of time than the Fowler's solution Furthermore, I have never seen any untoward symptoms follow the administration of arsenious acid, whereas the solution has produced arsenical dermatitis in a number of cases, notably factitious zona pectoralis A point which I have always observed has been to give a sufficient dose and I am certain that it is owing to this fact that attacks of zona were aborted in such a short time An examination of the histories of all the cases given will demonstrate the short time required to relieve each one and furthermore that this period was shortest in those who took the Asiatic pill Certainly, the time was very short and the neuralgia ceased when the eruption disappeared

The local treatment which I have employed is one which has always acted favorably with me Protection is afforded by a cotton dressing and a rapid disappearance of the eruption by means of a drying, analgesic powder I have essayed lotions, collodion, plasters, and similar methods but never found any one equal to the old and time-tried powder Another fact which I have observed is that the vesicles do not break down, no ulceration occurs and consequent scars do not result from an attack

While the treatment I have outlined is both rapid aud successful, it possesses another advantage which, in my opinion, is not the least valuable I allude to its simplicity It may be carried out by any practitioner of medicine it requires no special, rare, or costly preparations, and can be easily understood by any one It might be said that its very simplicity is its greatest objection in the eyes of those who look upon dermatology as a mysterious science instead of what it really is—cutaneous medicine

Before closing these remarks I desire to call attention to the fact that the most difficult thing to determine is the cause of herpes zoster While in some of the cases given, a neurotic base apparently existed, in others no such history could be elicited So far as parasitism is concerned I never could satisfactorily establish it nor do I remember that any one has succeeded in doing so positively That a neurotic element exists, however, is beyond doubt, in view of the constant presence of a neuralgia or some very marked pain which disappears simultaneously with the eruption

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CASE OF ACUTE CIRCUMSCRIBED EDEMA OF GOUTY ORIGIN

Read in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta Ga May 5 8 1896

BY BERNARD WOLFF, M D

ATLANTA GA

This paper is presented with a view to call attention to an etiologic factor which has apparently escaped the notice of writers on the subject of angio-neurotic edema

Quincke in his original and classic article (in the *Monatshefte fur practische Dermatologie* i, No 5, 1882) cautions against confusing acute circumscribed edema with that of menstrual, malarial and arthritic origin It has sufficient points of difference in gross appearance from these types, but as regards causation it can not be discriminated from the edema occasioned by these three causes Matas has reported a case of malarial origin in which the periodicity of the attacks was marked Osler asserts that the disease may be hereditary through many generations and mentions a family in which five generations were affected, including twenty-two members Milroy of Omaha described cases of hereditary edema, in which there were twenty-two individuals in six generations The cases could scarcely be appropriately called acute, as the edema was solid, affecting one or both legs and existed from birth

Alcoholic excesses, gastro-intestinal disturbances (Elliot, Quincke), mental excesses, fatigue, grief, traumatism, ingestion of certain articles of food, as fish, apples, etc , have been cited as causative factors In the latter instances the disease shows a close affinity to urticaria The disease is regarded as a vasomotor neurosis, by which the permeability of the vessel walls is greatly increased The latter, which is the view taken by Quincke, does not agree with the theory advanced by Unna of spasm of the muscular coats of the veins in explanation of urticaria, the giant form of which greatly resembles angio neurotic edema So long as the nature of gout remains unknown, the connection of it with the case in point may be alone explained by hypothesis The theory held by Cullen is expressed by Duckworth as "There is a diathetic habit which is expressed in, 1, a neurosis of the nerve centers, which may be inherited or acquired, 2, a peculiar incapacity for normal elaboration within the body, not merely in the liver, in one or two organs, of food whereby uric acid is formed at times in excess or incapable of being transformed into more soluble or less noxious products " This would bear upon the [illegible] t [illegible] he neurotic origi [illegible] neurotic ede [illegible] gout be regarded as a toxemia, why could not such a condition so lower the vitality of the vessel walls, reflexly, as to diminish their power of resistance to the passage through them of the elements of the circulating fluid? Or, again, might not the toxic principle having itself passed into the tissues, have attracted chemotactic to it a special exudate? Many of the general causes which evoke an attack of gout have been enumerated, as those also of angio-neurotic edema This is expressive of dependence upon a common causation The case in point is that of a lady, now 56 years of age, of unusually robust physique, the family history is excellent, the personal equally good, with the exception that the patient prior to the menopause suffered from frequent attacks of migraine and that she has for fifteen years been the subject of gout, the last joints of the fingers are distorted and misshapen by gouty deposits, the digestive organs act normaly Six years ago while sitting by an open window in a railway coach, the patient suddenly noticed a stiffness and rigidity of the left half of the upper lip, accompanied by tingling and numbness, the lip swelled rapidly, but the swelling continued limited to the left half of the lip At the same time the affected joints of the fingers became red and painful This attack, which greatly alarmed the patient, lasted for several hours and then disappeared The attacks recurred at intervals of four or five months About two years ago I saw the patient during one of the attacks The edema was limited to one half of the lip, which was smoothly enlarged, the mucous lining was smooth, shining, everted, the edema was board-like in hardness, the tongue was unaffected, the gouty fingers, particularly the index fingers, were very painful, red, flexion of the distal phalanges exaggerated, the skin over the tophi was tense and seemed about to break over the rough angles of the deposit The subjective sensations were not marked, there was the same feeling of rigidity and immobility of the lip, with tingling and numbness, no itching, the bowels were regular, there was history of dietary irregularity The attacks have become less and less frequent, the last one occurring about a year ago The occurrence of the attacks, synchronous with acute explosions of gout and the similarity of cause in both affections, constitutes presumptive evidence of their relationship in this case

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GRANULAR LIDS

Read to the Wabash County Medical Society of Indiana Oct 15 1896, and by unanimous vote requested to be published in the Journal of the American Mfdical Association

BY DUDLEY S REYNOLDS, A M., M D

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LOUISVILLE KY

The term "granular lids" means so much to the laity, and so little to the pathologist, that one may well feel surprised at the almost universal use of the term

In his "Synopsis of Diseases of the Eye and their Treatment," Mr Benjamin Travers, London, 1824, at page 277 says "The granular state of the tarsal conjunctiva is a very common result of the mild suppurative ophthalmia "

Desmarres, in his "Treatise on Diseases of the Eye," Paris, 1847, page 185, says "The palpebral conjunctiva, in advanced stages of puro-mucous conjunctivitis presents the appearance of a multitude of villosites These small granules occupy the whole surface of the lid, and resemble somewhat the small papillæ of the tongue" (La conjonctivê palpébrale, surtout dans sa portion tarséenne, offre une multitude de villosités, de petites granulations d'une extrême ténuité, et assez semblables, quant a l'aspect, aux papilles de la langue) He accounts for their presence by the distention of the mucous follicles, making pressure on the blood vessels at the base of the papillary membrane, interrupting the return of the blood from the papules, leading finally to such a state of engorgement as to develop a considerable degree of hypertrophy It would be difficult to find a better definition of that form of so-called granular lids, which we now recognize as hypertrophied papillæ

In the fourth edition, 1854 of Mackenzie's "Treatise on Diseases of the Eye," page 436, in describing the various stages of puro-mucous conjunctivitis, he says "It is characterized chiefly by the papillary structure of the palpebral conjunctiva remaining hypertrophied, and presenting a granular or sarcomatous appearance, while the lids, in this state, rubbing on the cornea, render this part of the eye vascular and nebulous " At page 454 of the same work, the author says "The granular prominences in question are nothing more than the papillæ of the palpabral conjunctiva, hypertrophied by inflammation " At page 643 begins a chapter entitled "Granular Conjunctiva " In the section on symptoms, page 644, the author says "In the angle of reflection between the lower eyelid and the eyeball, we not infrequently observe a row of bodies of a rounded form and somewhat vesicular appearance These are different from enlarged papillæ, and consist, I presume, in the muciparous glands described by Krause, enlarged by chronic inflammation "

Stellwag, 1867, page 327, divides granular conjunctivitis, which he describes as synonymous with trachoma, into two principal classes, the papillary, confined to the papillary region of the conjunctiva, and the pure granular, both varieties being sometimes observed at the same time in the same membrane That which he classes as the pure granular type, he describes as being "abundantly strewn with bodies resembling the spawn of frogs, which are somewhat swelled, and traversed by a coarse, vascular nétwork " The mixed type, he says, "is made up from the symptoms of granular and papillary trachoma " The so-called frog-spawn appearance in trachoma of the conjunctiva is a condition by no means rare in the mucous membranes of other situations, and I have rarely seen cases of these spawn-like affections of the conjunctiva, in which corresponding changes were not to be found either in the Schneiderian membrane, or in the pharynx

I have traced the descriptive language of the two forms of so-called granular lids with the intention of indicating the chronologic order in which these morbid conditions were first described, as indicating necessary modifications of treatment

Mr Soelberg Wells of London, "Treatise on Diseases of the Eye," third edition, 1873, tries to follow Graefe's attempt at a clinical distinction between papillary hypertrophy, and that "peculiar vesicular condition of the conjunctiva, which is frequently premonitory of that affection," and which he maintains was first accurately described by Stromeyer, 1861, and subsequently by Dr Frank of the British army, and in the learned reports of Sir Geoffrey Marston, 1862 Krause and Schmidt, after a painstaking series of microscropic examinations of the trachomatous bodies came to the conclusion that they are "closed lymphatic follicles situated directly beneath the epithelium " These two eminent gentlemen last named, were of the opinion that the vesicular bodies are merely anomalous states of physiologic organs, while Stromeyer, whose observations were chiefly limited to military barracks and hospitals, regarded them as a manifestation of a mysterious pathologic state, in some manner connected with defective hygiene Dr Marston, whose opportunities were perhaps greater than any observer of that time, found "vesicular granulations very prevalent amongst the poorer classes in Gozo " In discussing the probable atmospheric origin of this constitutional dyscrasia, he says, "the prevalence of vesicular disease of the lids is due to defective sanitary arrangements, and I conceive the palpebral conjunctiva offers a delicate test of the hygienic conditions of a regiment " These observations were begun by the military surgeons, and the first of them were published as early as 1848, yet it was as late as 1868 that Graefe first pointed out the true distinction in the clinical aspects of hypertrophied papillæ in the conjunctiva, and the true trachoma, characterized by an appearance resembling sago grains, or frog-spawn, in the conjunctiva, sometimes totally independent of, and without any manifestation of inflammatory changes in the membrane

That form of granular lids described as an acute primary disease, may now be easily accounted for upon the hypothesis that the preexisting state of trachoma, having escaped observation until the acute puro-mucous or so-called catarrhal conjunctivitis sets in I have known persons with apparently normal eyes, in whom the palpebral and retrotarsal portions of the conjunctiva were literally studded with ovoid semi-translucent bodies presenting an appearance closely resembling frog-spawn I can call to mind at this moment, a number of persons in whom this condition exists, and, but for an occasional attack of intermittent fever, there are no manifestations of ill health It is only when the conjunctiva has been disturbed by the presence of some ferment or by some traumatic influence, that the trachomatous bodies become a serious complication

From what I have already said, you would naturally infer that I make a broad clinical distinction in the conditions commonly called granular lids, and I think I have pointed out sufficiently the widely varying pathologic conditions upon which a clinical distinction may readily be founded

With the understanding that papillary hypertrophy is always preceded by some form of inflammation sufficiently severe to penetrate the parenchymatous structure, we shall have to consider 1, whether this inflammation was of traumatic origin, attended by some infectious disease, or, 2, whether the infection was of that mild and mixed type, the puro mucous, or of the purulent character incited by the staphylococcus aureus, or the gonococcus of Neisser, the latter being the most virulent type of purulent infection

The advanced stages of these varying types of infection can not be successfully combatted without reference to the character of the infecting material present It is, therefore, easy to understand why some writers have gone to such pains in describing the form of granular conjunctivitis peculiarly prevalent among soldiers and seamen as, military ophthalmia of a dangerously contagious type, because, the infection which originally incited the inflammatory changes in the conjunctiva, leading finally to hypertrophy of the papillary membrane being still present, preserves its own proliferating power, and kindles an inflammation in any mucous surface to which it may find access, of identical virulent character

Piringer concluded, from a series of experimental observations, that the activity of the contagium is precisely commensurate with the stage of inflammatory action present in the infected mucous membrane at the time the matter was taken for inoculation, and he found likewise, that in some instances, pus taken from the membrane in the declining stages of gonorrheal inflammation required from twelve to seventy-two hours, according to the activity of the process at the time of taking the matter for experiment

In my own opinion, Piringer's observations are defective, because of the uncertain and irregular manner of introducing the infection Six hours is sufficient time in which to develop, in a previously sound mucous membrane, a decided increase of vascularity and hyper-secretion of mucus, in the conjunctiva, and there is with these symptoms always present profuse lachrymation, and morbid sensibility of the eye to light In twelve hours pus is nearly always abundant, and the disease may be fairly said to have reached its acme by the end of twenty-four hours from the period of inoculation With the inoculation of the staphylococcus aureus, more time is required Forty-eight hours from the period of inoculation rarely finds the disease so well established as to determine its character In the puro-mucous types of disease, where the infecting material is the well known staphylococcus albus, it is not rare to observe that seventy-two hours elapse from the period of inoculation before the definite nature of the resulting inflammation may be determined

With these facts before us, it is not difficult to understand how Piringer was led into error in supposing that all pus from inflamed mucous membranes was of the same nature, excepting that it varied in degrees of intensity of action, in accordance with the stage of the inflammatory process in the membrane from which it was taken

Recognizing trachoma as a local manifestation of a constitutional infection of such mild type as, in some instances, to produce no constitutional symptoms of sufficient severity to attract attention, being characterized in the main by the local occurrence of neoplastic cells in the mucous membranes, even continuing for a long period of time without creating local discomfort, we shall be well prepared to understand the more grave feature of the trachomatous membrane after an acute inflammatory affection of the conjunctiva has run its course And it is this complicated condition that is so well described by Stellwag as the mixed type of inflammation, partaking partly of the character described as papillary hypertrophy and partly of what he calls the pure granular condition of the conjunctiva, due to the presence of neoplasms resembling frog spawn

If we are to be rational in our practice, we must never overlook the conditions which have brought about the morbid state we seek to relieve In the treatment, therefore, of the so called granular lids, it is of the utmost importance whether we have to deal with the uncomplicated state of hypertrophy of the papillary membrane following, 1, puro-mucous, 2 the golden-colored purulent inflammation, or 3, the purely gonorrheal type of local inflammation, and, whether in either of these conditions there was preexisting trachoma in the membrane

Uncomplicated trachoma may, in persons having an error of refraction which necessitates great strain of the eyes in reading or writing, thereby provoking continued hyperemia of the ocular structures, become a source of local discomfort by giving rise to abnormal pressure of the thickened conjunctiva upon the eyeball, otherwise it may fairly be stated that uncomplicated trachoma so rarely calls for relief, as to escape, in a vast majority of cases, the attention of the ordinary medical attendant

The treatment to be pursued in the ordinary forms must, of necessity, be generally stimulating and antiseptic, and in the main purely local While the treatment of trachoma, whether complicated or not, so far as the trachomatous bodies are concerned, is essentially surgical, and to insure against return of the neoplasms, constitutional medication is, in all cases, urgently demanded

I am thoroughly satisfied from my observation, that trachoma is *per se* the local manifestation of a constitutional infection, just as urgently demanding mercury and quinin as though it were some other form of that miasmatic infection which begets intermittent and continued fevers

If there is any virtue in the old methods of treating papillary hypertrophy by either caustics or astringents, it has entirely escaped my observation, and I am thoroughly convinced that the mildest forms of stimulating agents, such, for example, as the yellow oxid of mercury ointment well rubbed in, and the occasional use of active stimulants of the non-astringent type, as the solution of bichlorid of mercury, ¼ grain to the ounce of distilled water, in combination with 10 grains of chlorid of sodium, or, in the pale, flabby appearance of chronic cases, the crayon of muriate of ammonium, applied by gentle pressure to the surface of the everted lid Not one of these forms of treatment may be found sufficient to complete the cure in any single case Sometimes the necessity being apparent for the ammonium, at other times the milder applications being indicated by the high state of vascularity of the projecting papillæ In nearly all cases of well-characterized papillary hypertrophy, some modification of Pagenstecher's canthotomy must be done to prevent friction of the roughened surface of the lid against the cornea It is remarkable how rapidly persons subjected to this operation may subsequently be observed to recover, under wisely ordered local medicinal treatment It is never wise to give to such a patient a prescription for a collyrium, or salve, to be applied at home No nurse, however skilled or well trained, can possibly possess the discriminating judgment which would be necessary to determine the application necessary from time to time, and there is no plan by which speedy recovery may be accomplished, even by heroic agencies in the wisest and most experienced hands

Trachomatous bodies in the conjunctiva may be removed by the process of crushing and expression with Knapp's roller forceps, which represent the two cogwheels, between which the membrane is to be caught and crushed, or Noyes' forceps, which represent two smooth rollers between which the membrane is pinched up and compressed, or, by a modification, which I have found most useful I had Sharp & Smith of Chicago make the crushing forceps with the cogwheel in one side and the smooth roller in the other side I press the cogwheel high up in the retro-tarsal portion of the conjunctiva, and resting the smooth roller on the palpebral surface, I carefully compress and draw forward the imprisoned membrane in such a way as to squeeze out the gelatinous contents of the trachomatous bodies

My forceps are made of the combined qualities of those of both Knapp and Noyes The advantages of one smooth roller and one cogwheel, or grooved roller, require no elaborate explanation The subsequent treatment after crushing and expression of the trachomatous bodies should consist in the use of a mild saline collyrium A favorite formula for after-treatment is this Borate of sodium, 15 grains, chlorid of sodium, 5 grains, mint water and camphor water, each 1 ounce, to be dissolved and filtered This may be instilled into the eye every hour, or more or less frequently, according to the accumulating mucus, and the general sense of discomfort in the eye, the patient in the meanwhile taking small doses of quinin and bichlorid of mercury, and after ten days of this kind of treatment, in most young people, the solution of citrate of iron and quinin after meals Under this general plan most cases rapidly recover, of course, each individual case requires some modification of treatment suited to the peculiar conditions Whatever plan of local treatment may be determined upon, there are two great principles of science, though commonly neglected, an exact observance of which is absolutely essential to a successful final result

Surgical cleanliness is a term which implies something apparently beyond the possible comprehension of the average layman and I fear there are some members of the medical profession who, though well acquainted with the conditions necessary to establish asepsis, neglectfully proceed in violation of these important rules of scientific detail

No one but a skilled and well trained nurse may safely be entrusted to carry out the treatment of any local inflammation of the conjunctiva, whether acute or chronic, and it is practically impossible for the surgeon himself to administer the necessary treatment These difficulties are sufficient to account for a vast number of failures in the treatment of the varying forms of the so-called granular lids Having the patient under perfect control and constantly subject to rigid rules of personal hygiene, with a nurse whose hands are always washed immediately before instilling the collyrium or using the irrigator, never permitting the patient's hands to touch the eyes, the surgeon himself observing the most rigid discipline of his own person both before and after handling the patient, the chances of reinoculation or the fresh inoculation of some new infection is reduced to a minimum Beside all this, the patient under personal observation as to his daily habits, can be kept in a most favorable state of general nutrition for the rapid recovery of the local inflammation It is not saying too much, I think, to declare that nine-tenths of the cases of chronic inflammation of the conjunctiva, of whatever kind, receive frequent backsets or relapses from reinoculation of the preexisting infectious material, or the introduction of some new infection incident to the lack of those hygienic regulations which an institution, under the authoritative control of an experienced surgeon alone supplies

THE COMMON USE OF GLASSES

BY F C HEATH, A M , M D
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The wearing of glasses is so much more common than formerly that we are often asked to give an explanation Frequently parents express their astonishment that so many school children wear glasses, a thing almost unheard of when they were young A recent article on "Superfluous Spectacles" seeks to explain a part of this increase by the unnecessary prescribing of weak lenses "which have only a mythical value "

Are there any good reasons for this increase, or is specialism in this direction running mad like the wild rage for extirpating ovaries, stretching rectums, removing turbinates and snipping the muscles of the eye? There are reasons for the increase in the use of glasses and there is also something to be said as to unnecessary prescribing

Obviously the first reason for the more common use of glasses is that we have learned to recognize these eye affections and their multifarious effects as we could not in former times The intelligent and conscientious physician is no longer satisfied with giving anodynes to little or no purpose in protracted or recurring headaches, knowing that their most frequent cause is eye strain, easily remedied by glasses correcting refractive errors or lightening the burdens of weak muscles Neurologists have learned that nervousness, dizziness, insomnia, some forms of chorea and possibly graver affections are due to eye strain—at least that this will act as an exciting cause where there is any predisposition to such disorders The subject of reflexes has been overdrawn but oculists have certainly erred less than workers in many other lines Doubtless many of the symptoms of eye strain commonly called reflex are really part of a general neurasthenia, produced by the great amount of nervous energy consumed in overworking the intraocular and extraocular muscles, but in some cases due to other causes The favorable results from the accurate adjustment of glasses in those cases in which the eye is either the sole or partial cause of the symptoms are now a part of our every day experience Before Donder's time such cases went unrelieved, and often, from their sufferings or from imperfect vision, were not only incapacitated for work but also tortured by fears that they were becoming blind As an explanation of much of the increase in the use of glasses, then, we have the fact that we relieve thousands of sufferers who formerly went unrelieved and give useful sight to countless numbers, otherwise crippled by imperfect vision

But the question may be asked "Is not the more common use of glasses due also in part to an actual increase in the frequency of eye troubles?" This is undoubtedly true Advancing civilization has its disadvantages, among which are overwork of the eyes under unfavorable conditions With some the desire for wealth and with others the exertion necessary to secure a living in the midst of so much competition, lead to overwork in adults and the children suffer from the crowding methods pursued in the schools Special trades, like that of the lithographer, requiring continuous attention upon fine work, are particularly injurious The eye strain from such causes with its suffering and dangers to the eye, sometimes producing such serious lesions as choroiditis, retinitis, glaucoma and cataract is practically an affection of these bustling times, unknown to former generations Its remedial and preventive treatment by glasses is highly successful Much has been written on the production or increase of myopia, or nearsight, from prolonged use of the eyes on near objects, especially under unfavorable conditions High schools show the worst results—the myopia, in those of Germany ranging from 20 per cent in the lower to 60 per cent in the higher grades Of 1,133 school children examined in New York, less than 4 per cent were found myopic at 7 years of age but nearly 27 per cent at 20 years Von Hippel claims that the removal of unfavorable conditions as far as possible, as a result of these investigations, has reduced myopia in Germany at least 6 per cent The unfavorable conditions are all things tending to strain or congest the eyes, such as bad air, excessive heat, low desks requiring pupils to bend over their work, light either so bright as to irritate the eyes or so dim as to require straining to see, or light shining directly in the eyes, small or indistinct print, Greek and German text, too long hours of study with intermissions too short and too infrequent, and finally too much written work Written examinations should not be too frequent—while of value to promote exactness they are very trying to the eyes Cohn found of 10,000 school children in Germany 1 4 per cent of pupils in village schools near sighted, and 11 4 per cent in city schools, attributing the difference in proportion to the fact that the city schools were darkened by the height of surrounding buildings, while the village schools stood alone and received abundant light from all sides Possibly difference in the hours, terms and methods were also factors in favor of the village schools Here then is a field where we might lessen the amount of myopia calling for glasses by the same attention to these matters as has been shown in Germany

Enough certainly has been said to show that increased use of glasses is due in part to actual increase in eye affections

It remains only to consider the question of "unnecessary prescribing " Here we must make a distinction between the oculist and the optician, or any other persons assuming to prescribe glasses It is astonishing that any one will intrust a thing of such priceless value as the eyesight to opticians, jewelers, druggists or peddlers, the most skilled of whom know nothing of the diseases or needs of the eye Yet physicians have often sent patients to these incompetents! An optician may sometimes give a glass that is satisfactory, just as the druggist may do for a sick man, but such work is dangerous and unscientific These people who make free examinations, so-called, are certain to prescribe unnecessary glasses because they have to sell their goods The oculist has no such selfish motive, receiving the same fee for examination whether glasses are ordered or not Besides he stands on the same high plane of professional honor, feeling for humanity and devotion to scientific truth as the great majority of the scientific profession He may occasionally err in judgment, attributing too much to the refractive error found he may fail to recognize that such errors do not call for correction unless they produce symptoms of discomfort or imperfect vision, but his work is usually conscientious and thorough

The claim has been made that oculists too frequently prescribe weak lenses, "having nothing but a mythical value" Upon this subject Dr Starkey of Chicago made inquiry of many leading oculists, most of whom stated that they used them commonly and were convinced of their value Dr J L Thompson said "The evidence of patients is such in hundreds of cases that I am as fully convinced of the remedial power of these lenses as I am that the earth revolves upon its axis" Many confirmatory cases were cited My own experience is in accord with this view Doubtless many refractive errors of moderate degree produce symptoms only when the eye is overtaxed or the system below par These cases could often do without glasses by resting and building up their general strength, and the writer has had excellent results when this course was pursued In others the temporary use of glasses proved of advantage Where patients will not give up work relief can not be obtained without glasses and in the cases of greater refractive error these are practically an indispensable means of treatment

Finally, as a counterbalance to the unnecessary use of glasses in some cases, may be mentioned the fact that thousands who do not use them would be better off if they did, receiving the benefits of greater convenience in increase of vision, greater comfort in the relief of eye strain greater safety to the eye, preserving it from those possible and disastrous effects of strain, retinitis, choroiditis, glaucoma and cataract, and enabling little children, handicapped by imperfect vision and unjustly condemned as backward or inattentive, to compete successfully with their companions

Therefore, while we hope eye affections may be lessened by greater attention to conditions of work and hygiene in the future, we expect that glasses honestly and intelligently adjusted will be worn quite commonly, and will be considered not as an annoyance or an evil but as a great means of relieving sufferers and increasing their usefulness in the world

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SOME SUGGESTIONS ON THE MANAGEMENT OF DIABETES

BY CHARLES W PURDY, M D

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The writer's views upon the systematic treatment of diabetes have undergone but little essential alterations since last published[1] and therefore an extended or minute review of the subject is not here intended The object of this paper is rather to call attention to some of the more common errors in the management of those abnormal conditions of the system of which glycosuria is the index Our present resources for controlling or modifying glycosuria consist in the main of two measures, diet and medication, of which the former so vastly outranks the latter in efficiency that diet may be justly said to constitute our chief reliance Just one hundred years ago John Rollo first emphasized the important fact that limitation of the carbohydrate foods constitute the chief, if not indeed the only trustworthy, means of controlling or modifying the excretion of sugar in the urine in diabetic states Although the profession has had a hundred years to refine and put into practice the principle laid down by Rollo, yet if one were to judge from the average diet list now in use, one would almost be justified in the conclusion that the dieting of diabetic patients today has become a lost art It is true there have appeared within the last twenty-five years a few good monographs upon the subject of diabetes, but unfortunately these do not reach the profession at large The rank and file of the profession are obliged to look to works on general practice for guidance upon the present subject, as upon most others Now it does seem to the writer that without exception the sections devoted to the management of diabetes in modern systematic works on practice, so far at least as relates to dieting, are far from reaching the usual standard of excellence otherwise attained in such volumes While the general principles of management are usually most clearly laid down, too much latitude is generally permitted in matters of detail

It may be stated that diabetes mellitus is a more or less grave condition, depending upon several circumstances, the most prominent of which is the age of the patient As a rule, the disease as it appears in the young, that is to say, in patients under 30 years of age, is usually a progressive one and that toward a fatal issue The duration varies from a few weeks or months to four or five years, depending very largely upon its treatment Careful and judicious management will often give from one to two or even three years comparative comfort, even in those cases over which the shadow of death lingers, but greater hope than this is not as a rule justified in this class of cases Fortunately there is another and brighter aspect to this picture In patients beyond middle age the disease often appears in a much milder form, so mild indeed that it may be held absolutely under control by judicious management Thus as a rule as the disease appears in patients over 50 years of age, and if there be a well preserved body weight, it is not too much to affirm that if they succumb to the disease it will either be due to faulty advice or to their own negligence Even after 40 years of age the disease usually appears in a milder form, though exceptions to this rule occur chiefly in those of spare habit of body It is instructive to note that all cases of this class with very few, if indeed any, exceptions if they be mismanaged, or if they be left to themselves without management, will assume more or less quickly the more serious type of the disease and will succumb to it in a comparatively brief period of time

In the systematic management of diabetes, diet and medication should so far as possible be completely separated It may be unhesitatingly stated that in these cases in general, drugs rarely do much good while assuredly they often do much harm Moreover, when diet and medication are employed simultaneously in any given case from the start, the beneficial effects of dieting over the disease are very often unjustly attributed to the drugs employed, and thus it has happened that an almost endless list of drugs have been recommended as specifics for diabetes which are absolutely valueless, nay, worse, they are actually harmful in these cases, often preventing the full benefits otherwise obtainable from proper dieting Who is not familiar with the stereotyped article on "A new remedy for diabetes" that every few months appears in the magazines and goes the rounds of the medical periodicals? In it the author tells us he has discovered that a certain dose of a well known drug in his experience has reduced the sugar in the urine from 5 down to 2 or 3 per cent and it may be that two or three cases are cited as proofs, and thus straightway another new panacea for diabetes is launched upon the sea of medical literature If, however, we peruse such articles closely we will usually note that the author tells us the patient "was put upon a careful diet," which limited to a greater or less extent the carbohydrate foods *at the same time* the new panacea was administered, and we at once have the key to the *reduction* of sugar in the urine It is altogether safe to assume that had the panacea been omitted and the patient "put upon the careful diet," just the same if not better results would have been obtained

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[1] Treatise on Diabetes 1890 F A Davis Co Publishers, Philadelphia.

The first error often made, therefore, in the management of diabetes is the employment of diet and medication simultaneously, The invariable rule in these cases should be to first obtain all the possible benefits derivable from dieting and for this purpose from four to five or six weeks should be set aside for testing just how far dieting alone will control or modify the excretion of sugar

As already inferred the main principle in dieting diabetic patients hinges upon the *limitation* of carbohydrate foods *Limitation* then is the principle, not *elimination*, the latter word often being erroneously employed, because it is not possible to eliminate from any diet list absolutely all carbohydrate elements of the food We must, however, in many cases approach as nearly to complete elimination as it is possible to do, but in all cases this should be gradually brought about, rather than suddenly Step by step the more objectionable articles should be withdrawn until a point is reached where further reduction of sugar seems impossible, then and only then should any specific medication be attempted

By far the most serious and perhaps the most common error in dieting diabetic patients is in the matter of bread allowance We read in most of our works on practice that these patients may not eat ordinary table bread, but some substitute may be employed, most commonly gluten bread, or some of the so-called "diabetic breads" of which the market is overstocked If we follow this advice let us see what we shall furnish our patients in the way of a supposedly non-starchy food in their bread supply Bearing in mind the fact that ordinary home-made bread contains about 45 per cent of starch, let us see how this compares with the more common diabetic flours and breads upon our markets The following figures are taken from the analyses made by Dr Harrington of Boston The graham wafer, made of graham flour, contains 58 per cent of starch The gluten flour of Farwell & Rhines, of Watertown, N Y, contains 67 per cent of starch, the special diabetic flour of this firm contains 68 per cent of starch The gluten flour of the New York Health Food Company contains 66 per cent of starch Dr Johnson's "Educators," a biscuit claimed to be "absolutely free from starch," contains 71 per cent of that article The Boston Health Food Company s diabetic flour No 1, sold as absolutely non-starchy, contains 62 per cent of starch Such are average examples of the many foods in the market which we are advised to allow diabetic patients, and it is almost superfluous to add, although without doubt literally true that the practice of such advice has shortened the lives of thousands of diabetic patients

It is not alone the enormous starch contents of these commercial diabetic foods that is so injurious to this class of patients Gluten bread must of necessity be tough and indigestible in the highest degree, and thus it happens that the digestive mechanism, enfeebled and overtaxed as it usually is in these cases, prematurely fails when such food is submitted to it The same objection applies to bread made from almond flour, which was first suggested by that very able authority Dr Pavy of London The almond contains by weight 50 per cent of oil which no method yet devised has succeeded in materially reducing in the preparation of flour or meal therefrom In the writer's experience the average stomach of the diabetic patient quickly tires of bread made from almond flour and if it be long continued indigestion and collapse of assimilation ensues A very considerable experience with so called diabetic breads in our markets has convinced the writer that as yet there exists no substitute for bread worthy of that name, and moreover the advertised commercial articles ordinarily met with are the most pernicious humbugs

We must encounter the fact that the total elimination of bread from the dietary of the diabetic patient would constitute the greatest deprivation these patients could be called upon to meet After many patient and laborious trials with so called substitutes for bread in these cases the writer some years since abandoned them as not only useless but highly injurious Fully aware of the fact that many of these patients can without injury use a *limited amount* of table bread, while many others can not be made to assimilate the smallest possible amount thereof, the following method was adopted During the first week or ten days of dieting, the diabetic patient is permitted to have two ounces of his usual table bread (accurately weighed in a letter scale) with his morning and evening meals At the end of that time, if sugar still be present in his urine, the allowance of bread is further limited to one and a half ounces for his morning and evening meals (3 ounces daily) for another week Thus each week the allowance of bread is gradually reduced until a point is reached where assimilation of the bread allowance is complete and no sugar appears in the urine, or where sugar still remains in the urine at a point where further reduction by limitation of bread seems impossible If this method be carefully followed it will often be surprising how relatively large an amount of ordinary bread some of these patients can use without injury, the diet in other respects being properly regulated It is no uncommon experience with the writer to find the very first limitation to 4 ounces daily of bread to result in complete disappearance of sugar from the urine, and in such cases it is sometimes even possible to increase the daily allowance to 6 ounces of bread, although it is not advisable to do so until after three or four weeks careful dieting, thus allowing the liver to thoroughly unload its store of surplus glycogen The object in dividing the daily bread allowance into two equal portions, and giving one each with the morning and evening meal is because this insures the longest possible intervals between the ingestion of the carbohydrate food, thus offering better chances of its complete disposal by the enfeebled assimilating powers for this class of foods It will of course be found that the widest difference exists in the assimilative capacities for bread in different cases Some as first indicated will assimilate 6 ounces of bread daily without any excretion of sugar some can not assimilate more than 3 or 4 ounces Some cases supposedly of [illegible] re[illegible]anced type, as in young subjects, will often assimilate 2 ounces daily, at least for a long time until the natural progress of the disease approaches the point of the assimilative limit On the other hand in some cases it will be found that a half, or even a quarter of an ounce with the morning and evening meal, will provoke the increase of sugar excretion by the urine In such cases the use of bread must be totally abandoned by the patient, and the sooner this be done the better

The advantages of the above method are as follows The limitation of amylaceous food is systematic and definite, and we know precisely how much thereof the patient is getting in his bread supply It enables us to determine with precision the degree to which the assimilative powers for starchy foods is crippled in each special case, and this is all important because that degree differs widely in different cases Having found the capacity in each case, we are often able to supply a very material amount of carbohydrate food, still keeping within the patient's assimilative power for that class of food, and thus the carbohydrate food supplied goes to make up his body weight, enabling us often to maintain a fair balance of assimilation over waste as represented by body weight Lastly, this method gives to the patient an article of bread that is digestible, a matter that no substitute has yet accomplished

An error in dieting diabetic patients scarcely less common or harmful than that just considered is the somewhat general custom of permitting *ad libitum* the use of milk, indeed it is not uncommon to put these patients upon an exclusive milk diet In 1871 Dr Arthur Scott Donkin published a book in London the title of which was "The Skim Milk Treatment of Diabetes and Bright's Disease" The chemico-physiologic principles upon which this author founded his advocacy and practice of the use of milk in diabetes was speedily shown to be false by his own countrymen more eminent and expert than he, and moreover, Dr Donkin himself as a careful scrutiny of his own published records will show never cured a case of diabetes by this method, nor obtained anything unexpected or remarkable by this practice, a fact that the profession at large seem not to have realized A doctrine and practice so incomparably simple as the lofty practice of drinking whey, seems to have exercised the most astonishing fascination over both the lay and professional mind, since although the sage has assured us that "time cures all errors" yet twenty-five years has apparently made but little impression upon this false doctrine and its too many desciples, for have we not almost daily presented to our observation some wretched victim of this starvation practice?

Milk is by no means a safe article upon which to sustain adult life indefinitely, but with subjects who possess considerable surplus of fat, life may be prolonged upon it for some time provided the milk be of good quality It was left to Dr Donkin, however, to conceive the unique idea of first depriving the milk of its more highly nutrient qualities—the cream—before submitting it for use to diabetic patients, but he left them about one ounce of carbohydrates in each pint (lactine) possibly by way of sharpening the appetite for their allowance of whey If we examine the simple chemic problem of the composition of ordinary cow's milk, we find that each pint contains on an average 369 grains of nitrogenous matter, 350 grains of fat, 468 grains of lactin, and 72 grains of salines Now this 468 grains of lactin (about one ounce) is a milk sugar which resides chiefly in the whey, and as Dr Pavy has long since shown this carbohydrate "comports itself in the intestinal tract precisely as does grape sugar" The "Skim Milk Cure" therefore aims at furnishing to diabetic patients from a quarter to half a pound of sugar daily in a watery vehicle, which practically contains nothing in addition save a little saline and nitrogenous matters, both of which are for for the most part waste materials No adult person in health could survive indefinitely upon such an exclusive diet, because it would result in slow starvation, and in diabetic states death would be much more rapidly induced since the ingestion of such amounts of sugar would hasten inanition

It has been contended, however, by some that as a matter of experience the "milk cure' has exercised a controlling influence over sugar excretion in some of these cases, and although it is not to be denied that in a few isolated examples in a certain type of cases soon to be considered such is apparently the case for a time Yet the same and by far better results are always obtainable by systematic dieting on more liberal general lines which furnish to these patients all the elements essential for ample nutrition The type of cases above referred to is of the mildest order, such as is seen in people over 50 years of age with very full habit of body Careful observation will invariably reveal the fact that these subjects are heavy eaters, and furthermore, their histories will show that for the most part they have been large consumers of carbohydrate foods Glycosuria in such cases merely represents the overflow of untransformed glycogen resulting from enormous overtaxation of the function of the liver Such cases rarely possess the nervous elements of true diabetes in its more severe forms, nor yet that primary defect in the functional capacity of the liver, which is so prominent in intractable forms of the disease In short such cases would be ranked by authors under the division of glycosuria It is in such cases that sometimes the ' milk cure" apparently succeeds, and in such cases only, because in such cases the "milk cure" constitutes a method of enforced fasting, and although considerable carbohydrates are furnished with the milk in the form of lactin, yet the enormous curtailment of carbohydrates in the general food supply in these patients of heavy appetites, reduces the balace to comparatively moderate proportions, and the liver relieved from its long overtaxation assumes a nearly normal glycogenic function, and thus sugar secretion may become largely dimished and in some cases even cease

Bouchard has shown us the great importance of limiting the *quantity* as well as the *quality* of the food in many of these cases by pointing out the highly instructive fact that during the siege of Paris a number of his patients lost their glycosuria, though previously, when their food supply was ample he could not accomplish the same result by the most careful selection of the quality of their food As already indicated, then, the benefits desirable from the use of milk even in this special and limited class of cases, can be far more desirably accomplished by a regulation of the diet which will offer a more varied and agreeable food supply, as well as one that offers a wider and more ample nutritive range The great advantage of the latter is that it prevents the inevitable loss of weight necessarily incumbent upon a milk diet

When we come to encounter diabetes in its more pronounced form, such as we usually find in the young, and nearly all spare subjects regardless of age, the milk cure will be found to aggravate all the symptoms, and to hasten the progress of the disease toward a fatal issue A search through Dr Donkin's records and those of his followers for exceptions to the above rule would prove practically a failure, and if the experience of the writer is entitled to any weight, it shows in upward of one thousand recorded cases of diabetes no exception to the above rule

It may be gleaned from preceding considerations that another error not uncommon in the management of diabetes is the allowance of food in quantities *ad libitum* The amount of food that many of these patients naturally consume is very large, added to this the intense hunger created by the disease and, if unrestrained, the amount of food consumed becomes indeed prodigious Then too, the lay mind in general seems firmly wedded to the belief that the more food the average individual consumes the better it is for him This may be justly characterized as one of the greatest errors in regard to man's physical welfare in general, and in diabetes the force of the objection becomes more than doubled, because the very main spring of the disease consists of the loss of balance of assimilation over waste The careful regulation of the *quantity* of food of the diabetic patient should always, therefore, be ranked in importance as second only to the *quality* of the food itself, and here, as elsewhere, the strictest rules should be enforced

Before quitting the subject of diet, it may be noted digressively that our own continent furnishes a few permissible articles which these patients consider among their luxuries, and which are not usually found in European lists The most prominent and perhaps the most important in value of these is green corn on the cob The average diabetic patient may include this justly considered American luxury in his diet list not only without injury but, with certain precautions, with great benefit Indian corn stands almost at the head of the list of cereals in point of fat composition, while its sugar composition is very low (4 per cent) Its percentage of starch is very high (67 per cent), which would at first seem to debar it from use Experiments have demonstrated the fact, however, that if green corn on the cob be used by diabetic patients before the kernel becomes hard and ripe (before the starch granule is formed), it is practically harmless to these patients and, as a glance at its composition will show, it is highly nourishing By directing, therefore, that green corn be eaten while yet the kernel is soft and *slightly milky*, an excellent article may be added to the permissible list, and one that the average diabetic patient, especially if he be an American, will prize very highly

With regard to the use of beverages by diabetic patients, observation would seem to show that altogether too much latitude is permitted in this direction, especially in regard to the use of alcoholics With the exception of spirits, clarets, Rhine wine and American wines of the last named type, they nearly all contain large amounts of sugar The writer's analyses of a large number of the alcoholics in our market give the following results Beer contains from 4 to 6 grains of sugar per ounce porter contains from 6 to 7½ grains per ounce, champagne contains from 12 to 48 grains per ounce sauternes from 10 to 12 grains per ounce, the sweet wine class ranges from 10 or 12 for sherry all the way up to 140 grains per ounce for Malaga It will therefore be readily observed that it would be an error of the first magnitude to permit diabetic patients the indiscriminate choice of alcoholic beverages, since they could scarcely escape hitting upon one that would furnish a large amount of sugar, and that in its most pernicious form If the diabetic patient really needs alcoholics—and such cases are the exception, since as a general rule they are harmful—the choice should fall within the narrow limits of clarets or the Rhine wine type, or possibly a little spirits

With regard to the treatment of diabetes by the use of drugs, we shall be called upon here to meet strong prejudices It may, however, be confidently stated that when employed as specifics, their use can not be too strongly condemned, since without doubt they do more harm than good Indeed, it may be laid down as a rule that unless medication be aimed purely at supporting some organ or function that the disease tends to impair, it is more likely to prove injurious than otherwise The failing digestion may be aided by such agents as pepsin and pancreatin, the nervous elements of the disease may be in a measure favorably influenced by such agents as arsenic or strychnin, etc , but such measures will readily suggest themselves to the mind of any intelligent physician on general principles as occasion may require, and therefore they need not be dilated upon here We have to do here with drugs capable of doing injury in these cases, of which we may take opium and its preparations as one of the prominent examples Opium holds out no hope of cure to the diabetic patient, even in the mind of its most sanguine advocate, nor can it be successfully maintained that it does no harm to the organism in these cases To those whose experience it has fallen to witness the absolutely withering effects of the habitual use of this drug, not only over the entire physical organism, but also over the higher—the intellectual and the moral faculties—to such we must indeed assign a courage "worthy of a better cause" if they can calmly consign the remnant of the lives of these patients to such a blighting destroyer of both body and soul In the writer's experience opium, in any and all its forms, not only adds to the sufferings and discomforts of these patients, but it also hastens their progress to earlier graves It may be conceded for argument's sake that heavy doses of the drug slightly retard sugar excretion in some cases, but in so doing it aims at the very mainspring of nutrition and assimilation It increases the thirst, often causes the loss of sleep, aggravates the constipation and completely wrecks the already weakened nervous organization Of the antipyrin and salicyl series of drugs which have been lauded as specifics for this disease, it may be said without exception that they often cause albuminuria, and always aggravate such conditions, when present, to such a serious extent as to provoke serious and often irreparable nephritis Of the remaining long list of specific drugs which have been extolled for the treatment of diabetes it would be unprofitable to consider them in very minute detail, it is perhaps admissible that some of them are capable of doing less injury in these cases than opium and its preparations, but this is the most that can be said in their favor

The importance of sharply separating the diet and medicinal treatment of diabetes has already been touched upon in the be[illegible] th[illegible] ticle, but there is a phase of this mat[illegible] profitable to glance at in co[illegible] g th treatment of diabetes with drugs the mind of the patient, ever prone to believe in the occult influences of medicine, quickly learns to rely upon his tablet or drops, rather than upon the more potent influences of a carefully regulated diet, upon which in the main his physical well-being depends Dieting requires of him so much in the way of resolution and effort, while the pellets or drops exact so little of him of either, that naturally he turns for relief to that which appears to him the easier course and the latter he most assuredly will do unless his mind be strongly impressed with the importance of pursuing the more difficult but more promising course These patients have a right to be fairly dealt with when appealing to a great and dignified profession for advice concerning questions which involve their existence, and therefore they should be taught from the start that their lives will depend largely upon their own individual efforts They should be taught that the amplitude of their comfort, as well as the span of their years, will depend mostly upon a systematic method of dietng, and after having handed over to them this important key, they will have it in their power to open or to shut the door to their future, so far as this can be compassed by human power

57 E 20th Street

THE MODERN PATHOLOGY AND TREATMENT OF ACUTE OTITIS MEDIA

Read before the Chicago Academy of Medicine, November 1896

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CHICAGO

It is not going too far to say that the treatment of ute middle ear disease largely in vogue today is, in any ways, nothing more nor less than an elaboration that which was recommended for the same condi- on by our great medical genius Hippocrates more an 2,000 years ago It would seem that ever since ose ancient days, our medical fathers have striven establish, in a more or less empirical way, their individuality upon the most remote minutiæ For instance, on one side we have a large group of those who believed in cold, on another those who believed in hot applications As a third class we may array those who strove to establish the proper indications for the employment of both heat and cold And then on every hand our attention is arrested by the eternal ' drop," from milk (preferably woman's milk), hyssopum, ox-gall, camomile tea, down to the sulphate of zinc solutions of these latter times, always more or less empirical and doubtless always more or less harmful

Indeed, although DuVerney, in 1683, recommended camomile decotions for acute ear troubles, it has clung to the laity to this very day It is largely used among the Polish and German people, so that I have grown to recognize those ears which have had this substance dropped into them, by the sediment of gum adhering to their tympanic membranes I believe it wise in teaching *to condemn drops broadly* In acute conditions they can only be used in the sense of a fetish or amulet We are forced to this conclusion by considering the conditions as they here exist First, in all except those rare cases in which violent necrosis of large areas of the tympanic membrane takes place, the perforations are at first very small, measuring in diameter from that of a hair to that of a pin-head The surface tension of a drop of water alone or a column of water which the external auditory canal will accommodate, will prevent its penetration through such a small opening, let alone solutions with greater specific gravity And even if such solutions did enter beyond the perforation, what can we hope to accomplish? Entrance can take place only by the solution diffusing more or less with the contents of the tympanic cavity, and when this occurs we have merely the formation of an insoluble precipitate of the secretory contents of the cavum in the case of anodynes and antiseptics That this is bad treatment will appear later on

Cataplasms, detergents, leeches, etc , have in turn been extolled by one and decried by another The general treatment too has varied, from the purgatives and emetics of DuVerney to the opium and quinin of the present day In the meantime the main issues have been lost sight of

Mark you, I do not wish to hold up to ridicule the therapeutics of our forefathers Far from that, I realize that the history of otology, like the history of all other things, is one of development Step by step we have marched on to a larger comprehension of the various manifestations of acute infection of the structures within the ear What I do wish to insist on is, that as regards the ear, therapeusis up to the very recent past has not kept pace with pathologic knowledge And it seems to me a fit time to strike out into new paths as regards the treatment of acute middle ear disease, to endeavor to follow a more rational mode of action in the light of the advancement which has been made in bacteriology and pathology of acute otitis In doing this we must entomb some pleasant fancies mayhap, but the discomfiture which this causes will be amply compensated for by the more satisfactory results of treatment

Clinically we divide the inflammatory conditions of the middle ear into acute and chronic catarrh, acute and chronic suppuration, etc , and these again into mild and severe forms, but the lines which divide these types are not fixed, for it is a common experience to see one form passing into another Especially is this so as regards acute catarrhal and suppurative otitis Maggiora and Gradenigo after examining bacteriologically twenty-nine cases of middle ear inflammation came to the conclusion that the clinical division of otitis into suppurative and catarrhal forms is not justifiable from a bacteriologic standpoint But it will be the endeavor of the writer to demonstrate that the clinical division has a well marked foundation pathologically if not bacteriologically

Whatever the inflammatory type, catarrhal or suppurative, pathogenic organisms play the most important etiologic rôle The germs most frequently present in the exudate are the dipplococcus pneumoniæ, streptococcus pyogenes, less frequently occur the staphylococcus pyogenes albus and aureus, the pneumo-bacillus of Friedländer, the bacillus pyocyaneus, staphylococcus cereus albus and micrococcus tetragenes Lately Pes and Gradenigo have found the bacillus pyocyaneus as an unmixed infection The studies of these authors as well as those of Gessard and Chasrin with this microörganism prove that it is capable of producing local as well as general infections (the so called *"maladie pyocyanique"*) Microörganisms are seldom found in pure culture. Kanthack out of thirty-one cases of acute otitis, examined before the perforation had occurred, found pure culture of diplococcus pneumoniæ only three times. The staphylococcus pyogenes is most frequently found as the mixed infection.

Route of infection.—The tympanic cavity may be infected by way of

1. An intact drumhead, as in erysipelas, furunculosis.

2. Through a perforation of the tympanic membrane, augmenting always an existing inflammation.

3. By way of the circulation: 1, in the congenital otitis media accompanying infectious diseases in utero, variola, recurrens, typhus, diphtheria (Moose), etc.; 2, in the same diseases occurring later in life; 3, in endocarditis (Trautmann).

4. Via the tuba Eustachii: 1, indirectly by way of the lymphatic interspaces of the connective tissue; 2, directly by continuity of the mucous membrane, and this is the most common way; 3, through the lumen of the tube, as in forcing infection-laden mucous into the ear, in coughing, vomiting, douching, etc. It is said that infections may reach the middle ear by way of the fissura petrosquamosa, and Gradenigo in a case of cerebro spinal meningitis has found the same micro-örganisms in the tympanum about the region of the canalis Fallopii as were present in the meninges.

Apart from the peculiar pathogenic character of the various microorganisms there are other factors which determine the type of an otitis. In other words, the same organism may, under different conditions, give various types of inflammation. This is dependent on the intensity of virulence, the number of organisms, the resistence of the tissues, the rapidity of invasion. On these data Moose has divided the resulting inflammation into three catagories:

1. Those cases in which a relatively small number of organisms gain an entrance to the tympanum through the lumen of the tube and produce there, by a mucoid metamorphosis of the cell protoplasm, the secretory form of middle ear catarrh, which, without treatment, may exist for months or years without suppuration occurring. Suppuration supervenes only when the organisms increase in number on account of a change occurring in the nutrient media of the mucous membrane from taking cold, injury, or when additional organisms are forced into the middle ear.

2. Those cases of hermatogenous invasion which cause infiltration of numberless polymorphous wandering cells in the mucous membrane as, for example, in measles, scarlet fever, diphtheria, etc. Each focus is inclosed in a fibrinous network causing the mucosa to become hyperplastic. In this form there is no tendency to suppuration. Instead, the microbian product of metabolism may be exerted to produce changes in bones, necrosis of the blood vessels, etc., but metamorphosis occurs in the end without the formation of pus. The most probable cause of this is a relatively small number of microbes of attenuated virulence.

3. Cases in which suppuration occurs, the same being divided into: 1, those in which suppuration is slight without perforation; 2, those in which suppuration is profuse with perforation; 3, those in which the onset is rapid, the suppuration enormous, with destruction of large areas of the tympanic membrane and exfoliation of the ossicles.

I will not consume your time with well known macroscopic and microscopic appearances of an acutely inflamed mucosa. There is little difference between that lining the ear and that found elsewhere in the body with, perhaps, these differences. The glandular element is scant in the otitic mucosa, and the membrane here serves the double function of periosteum and mucous membrane. The mucous of the cavum is largely elaborated by the pavement epithelium; the latter peculiarity explains the proneness with which otitic inflammations result in necrosis.

Now, all experience proves that the purely catarrhal as well as the form of otitis media may be caused by the same microörganisms, and I believe that still another factor always enters into the determination of the type of otitis than those enumerated by Moose, and that is the route of invasion. It is my opinion that the difference is altogether due in a large majority of cases to the mode of invasion. That is to say, when the invasion is hermatogenous we have suppuration. When the invasion is from the surface, *i. e.*, via the lumen of the Eustachian tube and remains superficial, we have a catarrhal inflammation. That a purely catarrhal otitis may become purulent there can be no doubt, and when this does occur it is likely that the substrata of the mucosa are invaded either through the circulation, as a general infection, which is relatively rare; from the pharynx, through the lymph spaces of the tuba Eustachii, which is less rare; or from the surface of the mucosa, the superficial protecting epithelial cells having been destroyed, though this is not a *conditio sine qua non*. I believe that when we have a purulent type of discharge we may be sure that the infection is affecting the substrata of the mucosa.

In approaching the treatment of acute otitis media, let us consider the factors which confer immunity in regard to the invasion of the structures and study, if possible, the measures which nature adopts in arresting such invasion. The question arises at once: "Can we regard the normal tympanum as an aseptic cavity?" Though there have been attempts made to prove that it is aseptic, I hesitate to so believe. When we consider the close relationship which exists between the naso pharynx and the ear our doubts are excusable. That it possesses rather strong aseptic powers is proven by those cases of known asepticity which recover in a few days. The truly aseptic cavities, such as the joints, plura, etc., do not so react. Indeed, in order to retain the power of resisting microbian invasion it would appear to be necessary that that power be continually exercized. That such a power is possessed by the nasal mucosa would seem to have been proven by the researches of Thompson and Hewlett, and that the same attribute is possessed by the mucosa of the tympanum is highly probable. In what does this bacteriocidal power reside? From observations which I have made on two cases of hydrops ex vacuo of the tympanic cavity, I am led to believe that it largely exists in the secretion itself. The external auditory canals of these cases were carefully sterilized with sublimate packings for two days and after paracentesis the clear, somewhat tenacious mucus was collected in sterilized capillary pipettes. A drop of this transferred to a coverglass and placed in a cell will remain sterile until it quite dries up. A drop inoculated with an attenuated culture of staphylococcus pyogenes aureus and kept at a brood temperature in a moist atmosphere was found sterile after ten hours. This germici[illegible] er [illegible] ver, [illegible] destroyed For instance, if, after the first four hours, additional staphylococci be added, or if we may mix with it at the beginning about one-fifth by volume of egg albumin the bactericidal powers fail A fraction of a drop of 1 per cent solution of zinc sulphate will produce the same destructive results

The treatment which I will here outline has been followed during the past two years in my service at the Michael Reese Hospital, at the Post-Graduate School and in my private practice It is based on principles first advanced by Schwartz and later Pes and Gradenigo

Local bleeding has been carefully eschewed I regard cataplasms as not only of doubtful service but actually harmful They denude the skin of its protective coverings, and thus open up new portals for the entrance of infection And if a mastoid operation should become necessary the dangers of sepsis are increased by the raw suppurating surface left by the blister in the very field of operating Further, I am far from being convinced that they have any marked influence on the pain or course of the inflammation

I regard the employment of cold as of distinct worth in many cases This is employed by means of a Leiter's coil or a common ice bag The ordinary condum is a very good form of bag, being light and flexible, and on account of its peculiar shape especially adapted for coiling around the mastoid region Heat may be employed, if deemed necessary, by applying hot antiseptic fomentations or the sand bag

Anodynes and all other drops have been abandoned for reasons already mentioned at the beginning of this paper That anodynes are absorbed at all when dropped into the ear is doubtful That they are infectious is certain Therefore, as our whole endeavor is toward asepsis they have been abandoned Narcotics for the relief of pain are best employed internally or hypodermically Syringing has also been proscribed for reasons already mentioned in speaking of drops Before perforation occurs irrigation can do no good as a means of cleansing and antisepsis in the middle ear, because the intact tympanic membrane closes off the cavity from the external auditory canal The external auditory canal may be rendered aseptic much more readily by a moist dressing It is my experience that irrigation, as a means of applying heat or cold for their antiphlogistic or quieting effects, is not well borne, that is, in a number of cases it has added to the pain and increased the congestion Beside, an apparatus which will enable us to use continuous irrigation in the external auditory canal is very cumbersome The wetting of the bed and the patient is almost unavoidable, especially when the patient is young *Intermittent* hot irrigation has proven harmful in my hands Occasional syringing with sterilized saline solution has been allowed to clear the external auditory canal when the secretions take on a cheesy character which accumulates about the walls and membrane In this connection I would like to exhibit a syringe which I have had made for me by McElroy It is of glass, which may be rendered aseptic by boiling In addition it has a removable nozzle By this device the nozzle, which is the only part in danger of infection, may be changed after each time it is used Another point in its favor is its extreme cheapness

Politzerization is never performed in acute otitis media, either before or after perforation I regard the procedure in these cases as dangerous, as by it fresh organisms are probably driven into the ear or into the mastoid antrum each time it is performed

To my thinking, the blowing of the contents of the Eustachian tube into tympanic cavity is not only unreasonable, but in a high degree dangerous The mucous purulent contents of the tube may drain off into the pharynx, indeed, the ciliary movements of the epithelium lining the tube renders this quite easy Why, then, force the more or less septic mucus into the middle ear whence it can escape only with the greatest difficulty? If our modern observations are correct, and we accept the dictum that the violence and chronicity of otitis is largely due to the amount of secondary infection, are we justified in supplying this very infection-bearing material by our Politzerization, in order to accomplish a passing reestablishment of ventilation of the middle ear? Surely not I do not believe we are warranted in doing so even after perforation has occurred With a perforation it has been said that by Politzerization we aid in emptying not only the Eustachian tube, but also the middle ear by driving the contents into the external auditory canal The same objections are as valid here as they were in regard to Politzerization before perforation We unnecessarily run the risk of forcing septic matter from the tube into the middle ear As regards the discharge, that may be much more readily evacuated from the cavum by means of the capillarity of an aseptic, or better, an antiseptic gauze drain

Politzerization is used, albeit with great care, after the discharge has ceased, the perforation closed and due attention paid the condition of the nose and nasopharynx If an inflammation persists here after closure of a perforation, I substitute Delstanche's rarefacteur, inasmuch as it accomplishes almost as much as Politzerization in preventing adhesions and anchylosis If there are indications of a tendency toward adhesions before closure occurs, I employ tubal injections of vasenogen with external massage by means of the rarefacteur or the latter procedure alone

If fever is present the patient is kept in a recumbent position when possible, although I have had a number of ambulatory patients with temperatures of 99 or 100 degrees F who made satisfactory, recoveries Obstipation is most usually relieved by the mild chlorid, 5 to 10 grains, combined with an equal quantity of bicarbonate of soda When we have seen the case soon enough we have never waited for spontaneous rupture of the drumhead

Paracentesis has in our hands given the most satisfactory results We regard as positive indications for its performance in acute troubles, pain with or without fever, and the demonstrable presence of fluid in the middle ear As negative indications, 1, the presence of fluid in the middle ear without pain or fever, 2, pain, continuing for twenty-four hours with congestion, but without fever or the demonstrable presence of fluid

The strictest antisepsis should always be observed If possible the auditory canal is packed with an ordinary dressing for as long a time as possible before the operation This moist dressing will be the means of conducting the heat or cold of applications applied externally to the deeper structures If this is not advisable the canal is carefully swabbed out with sublimate, 1-1000, immediately before the operation The point which I regard with the greatest favor for incising the membrane is along its inferior circumference, a fraction of a millimeter from its margin

Incision —This is the most dependent part of the cavity and gives the greatest chance for the escape of the fluid contents In skilled hands there is no danger of injuring the fenestra rotunda With adults anesthesia is unnecessary When necessary in children ethyl bromid is used After the paracentesis the discharge and blood is carefully swabbed away by means of sterilized cotton pledgets These pledgets are kept constantly on hand and are prepared in the following manner Common toothpicks are used as carriers and the ends of them wrapped with absorbent cotton Test tubes are filled with these, and the tubes stopped with cotton as is done in preparing them for bacteriologic purposes The whole is then sterilized by means of dry heat In this way we have always at hand thoroughly sterilized swabs The external auditory canal is then packed with a strip of sterilized gauze one-quarter to one-half inch broad, care being taken that it barely touches the membrane As our view of the drum-head is shut off as soon as we introduce the end of the gauze into the auditory canal, I have devised a probe for packing the gauze It is graduated in millimeters, and by taking the measure of the depth of the canal before introducing the gauze we can see at any time to what depth the gauze has been introduced It is also roughened on the end so that it more readily catches the gauze We have used iodoform, sublimate and boracic gauze Iodoform gauze is irritating to individuals and objectional on account of its odor, but on the whole it has been found the most satisfactory The naphtholated chinolin gauze of Haug would seem to be especially suitable for this purpose as pointed out by Fougeray The gauze contains 5 per cent chinolin and 2 5 per cent naphthol This combination forms a salt which is deodorant, is highly antiseptic and soluble in pathologic fluids

After the gauze is in place the vestibule of the auditory canal and the conchæ are packed with sterilized cotton and the whole is held in place by collodion applied from the edges of the cotton to the skin It is very remarkable what an enormous amount of fluid may be extruded in some cases after such a dressing Frequently the dressing becomes saturated twice or thrice daily In these cases it were better to put on a voluminous external dressing held in place by a bandage

In fact, by paracentesis and the subsequent antiseptic dressings all the indications for the relief of acute otitis media are met If there has existed a diminished atmospheric pressure paracentesis equalizes this as speedily as Politzerization The congestion is reduced by the local hemorrhage necessarily accompanying the operation Pain is more effectually relieved in this way in the majority of cases than in any other The cavum is continuously emptied of its contents by the capillary attraction of the gauze drain while additional germs are prevented from invading the cavity from the external auditory canal

While I am unable to give comparative statistics of this and other methods of treatment, I can say that by our mode of treatment the course of all cases of acute otitis media is shortened and the number of cases which go on to chronicity is greatly diminished Surely complications such as those necessitating operations on the mastoid are very much reduced And there is a sense that those patients treated by this method are much less liable to recurrent attacks

DISCUSSION

Dr Adolph Gehrmann—To me, the interesting point about a subject of this kind, is the relation of bacteriologic infection to all of the mucous membranes, whether the mucous membrane of the ear, the throat, or of the stomach It is practically impossible to have an infection with one particular kind of micro organism, because we have an open space which affords access to the ear and other surfaces where bacteria of all kinds are present at all periods Infection through the blood, deep down under the mucous membrane, can take place, and can localize itself as an infection by one particular species of organism The cultures, as a general thing, show mixed varieties, a number of species being present That the infection should give such great differences clinically is a remarkable part of the whole pathology of mucous membrane infection We will find sometimes that bacteriologically the organisms are the same, but the differences clinically are marked indeed, especially in the throat This is true with some well known organisms The diphtheria organism can give the widest clinical differences in its action on the throat, and still under the microscope, bacteriologically and experimentally, the cultures obtained will be practically alike Just why this takes place has not been fully explained, but it is due probably to the resisting powers of the cells or fluids of the blood serum which are transuded through the mucous membrane Infection of the middle ear, showing a difference clinically, I should think would not depend entirely upon the character of the fluid which is excreted but largely upon the particular species of organism which is localized and which is the infective agent If we have those organisms which produce suppuration, the chances are suppuration will be the clinical symptom If we have organisms in pure cultures, which do not produce suppuration, or in combinations among themselves, a serous inflammation or an inflammation without the formation of much pus, will be the clinical symptom The causes of suppuration are due to toxins that are produced, which are so irritating to the white blood cells and fixed tissue cells as to be positively chemotactic and cause a collection of leucocytes and multiplication of the tissue cells We may have infection with certain organisms with various forms of streptococcus, which would not lead to extensive suppuration, yet such fluids would be found to contain a good many pus cells in them, as well as a good many epithelial cells When we have pus infection the prognosis is most serious, as the process is more extensive and causes greater pressure If the bacillus coli communis is found in the middle ear infection suppuration would be the clinical symptom

Dr Frederic D Owsley—I have listened to Dr Pierce's paper with a great deal of interest and I congratulate him on the grace and ability with which he has presented his views From a pathologic standpoint I have only the highest commendation for his paper, but the method of treatment recommended I can only partly indorse With his belief in the efficacy of cold and the uselessness of medicating the tympanum by means of drops I heartily agree

I wish to call attention to the fact that frequently good results are not obtained from the use of cold, because it is not used intelligently , it is either not applied long enough or vice versa Experiments have shown that cold applied continuously will cause contraction of the muscular coats of the blood vessels for between five and seven hours , if continued without intermission over that length of time, it will produce paralysis of the muscular coats with dilatation My plan is to apply cold continuously for not over four hours, an intermission of two hours, and then a reapplication of cold I can not agree with Dr Pierce in his recommendation of paracentesis in cases of acute otitis media I do not believe it is warranted except in those cases where the local appearances are such as to lead us to believe that there is pus in the cavity In all textbooks on the subject there is a distinction made between acute otitis media and acute suppurative otitis media In the first mentioned condition, I do not believe that paracentesis is justifiable, except in those exceptional cases where the pain is so intense that it can not be controlled by any other means

In the suppurative form, which is indicated by local conditions of the tympanic membrane, of course paracentesis is indicated I do not agree with Dr Pierce in his condemnation of Politzerization in otitis media In my hands it has been efficacious in the majority of cases, and together with proper antiphlogistic measures it has prevented suppuration and perforation Where suppuration and perforation have taken place, I do not think it wise to dispense with Politzerization as a means of emptying the cavity of its purulent contents

Dr Wm H Wilder—I do not think one is justified in condemning the application of heat and then commending the application of cold in cases of acute otitis media I am somewhat skeptical about the reduction of temperature or any influence upon an acute inflammatory process in a part so deeply situated as the middle ear by the application of cold to the mastoid region, as I understand Dr Pierce advocates The application of heat, on the contrary, is usually made by the method of irrigation in these cases of acute otitis By throwing a gentle stream of warm water into the external auditory meatus and allowing it to come in contact with the tympanic membrane, you bring the heat to bear directly upon the inflamed part, or as nearly so as possible, whereas it would be injudicious to apply cold in the same way, as it would probably increase the pain very materially Unquestionably the application of heat to the tympanum by irrigation relieves many cases It is an old remedy, recommended by the most eminent authorities on the subject, and by its early use the inflammatory process is frequently checked, the pain relieved and the necessity of an operation thus avoided

I heartily endorse the Doctor's views in regard to paracentesis in certain cases I think where the pain is not relieved by the application of heat, that paracentesis is indicated, particularly if there is any bulging of the membrane showing that there is considerable effusion into the tympanic cavity In such cases the operation affords prompt relief from the pain But even with that, in some cases permanent relief is not afforded unless we can empty the tympanic cavity, and one of the most efficient ways of doing this is by mild Politzerization, and I can not agree with the Doctor in his condemnation of this well tried method, and I do not see in it the dangers that have been referred to by others It has been well said that the mucous membrane of the tympanic cavity has bactericidal power, and therefore the danger of further infecting a cavity already septic by sending air into it from the pharynx is far over balanced by the good obtained by forcing out the exudate that is there It does not escape so easily after simple paracentesis I have had cases where nothing short of Politzerization would force the material out of the opening that was made in the membrane Furthermore, the opening will often close soon after the operation, and the wound will be healed before the cavity has been emptied of the exudate It has been my practice in these cases, especially where I find that the fluid in the tympanic cavity is sticky and will not easily escape, to resort to Politzerization immediately after paracentesis, and so far I have no reason to regret it

Dr **WM L BALLENGER**—Dr Pierce is to be congratulated on the pathologic and bacteriologic portions of his thesis Much is therein stated that places the treatment of acute ear cases upon a rational basis As to paracentesis, as advocated by Dr Pierce, I wish to take some exception The cause of the pain in middle ear inflammations is due to the fact that the Eustachian tube itself is closed either by reason of swelling or because of the tenacious mucus which has plugged it The logical treatment should endeavor to establish a patulous condition of the Eustachian tube In treating cases of otitis media, we must not think of treating this condition *per se*, we must think of inflammation which probably involves more or less the nasal and naso pharyngeal spaces or cavities The otitis is simply one point of the inflammation the one which causes most of the pain because of the isolated position of the cavity If we wish to promptly relieve these acute conditions we must relieve the general catarrhal inflammation which is in close proximity to this cavity We will find this particularly in the vault of the pharynx—a post-nasal catarrh, or possibly there are adenoid vegetations obstructing the Eustachian tube If these conditions are relieved, as they can be, more or less, by astringent and aromatic washes, we do a good deal toward the immediate relief of the middle ear catarrh Mild Politzerization in the less severe cases of middle ear inflammation will be tolerated and followed in most cases by marked relief As to the danger of introducing other germs into the cavity by this method Dr Pierce has possibly overdrawn it a little, because the Eustachian tube is there for the purpose of aerating the middle ear, and there can be no particular harm in resorting to Politzerization even while there is inflammation present

Dr **EDWARD T DICKERMAN**—The preceding speakers have differed very materially with the essayist, and I rise to not only sanction everything he said, but to emphasize one or two points With reference to heat and cold, I shall not discuss this phase of the subject Both have their place There are absolute indications for paracentesis, and when it is done, it should be done thoroughly, the puncture being made in the posterior inferior quadrant close to the bony insertion This operative measure is done for two purposes If there is a catarrhal condition with an exudate, it is done to relieve the pressure produced by the exudate If a purulent condition exists, paracentesis is resorted to to drain the cavity, as we all know the indications for operating on any cavity in which there is pus, is to effect drainage, and this can only be accomplished by paracentesis I congratulate the doctor on the forcible manner in which he has brought forward the aseptic and antiseptic treatment of this condition There is no disease in the category of medicine that has been so much abused as that of otitis media, and the various drops to which the doctor referred deserve the strongest condemnation Asepsis should be carried out as thoroughly as possible

A word or two in regard to drainage This is accomplished by capillary attraction, and I think in some respects wicking is superior to gauze You can introduce the former right up to the opening in the membrane and by its capillary attraction you can thoroughly drain the cavity

As to insufflation or Politzerization, I with the Doctor heartily condemn it I do not consider it good practice In the first place, we have a Eustacian tube which is filled with a tough or tenacious mucus, and by means of insufflation you blow this mucus into the ear, and it is exceedingly difficult to get it out again It does not drain, and it is a culture medium for micro-organisms The best method to drain the middle ear is not by Politzerization, but by treating the Eustachian tube itself, and this can be accomplished by treating first the orifice by the introduction of astringents into the tube, in that way reducing the inflammatory changes that have taken place and establishing communication with the middle ear

Dr **HENRY GRADLE**—The speaker (Dr Gehrmann) noted an interesting fact, namely, that the exudate in the purely catarrhal form, as well as in the suppurative variety, contains the same microbe, one or more varieties, and of these I may mention the pneumococcus, staphylococcus, streptococcus, and occasionally the pyocyaneus Evidence on this subject is definite according to obvious German, Italian and some English observers Yet these two forms are clinically separate and distinct At the beginning, it is difficult to say which form we are going to have when pain first begins, but ultimately the course is entirely different according to whether it is catarrhal or the suppurating form How rarely do we get the history from a patient with the purely catarrhal inflammation of the middle ear that he has ever had suppuration of the ear previously in his life, or vice versa It is one of the great rarities to see suppurative disease of one ear and the progressive catarrhal form of the affection in the other We may find the suppurative form in one ear and more or less deafness in the other, but this deafness is stationary and but very rarely progressive Progressive deafness in one ear and the suppurative form in the other are almost unknown While the microbes may be the same, the result depends upon the resisting power of the organism

As to the therapeutics, I think Dr Pierce represents the modern German school with all its dicta, and we can not cavil with him or dispute his statements

In the first stage, when the diagnosis is still in doubt as to whether we are going to have the suppurative form or simple catarrhal otitis media, some measures are applicable which the Doctor did not include in his paper I would principally mention carbolated glycerin (15 per cent) I have had definite experience in many instances in satisfying myself that it has a distinct effect on the pain Whether it has an effect on the course of the disease it is difficult to say, and I am not quite settled in my opinion, but in those cases which look like incipient suppurative otitis the use of 10 per cent or still better 15 per cent solution of carbolic acid in glycerin will give often timely and permanent relief, although it fails in some instances In the incipient stage I would not hesitate to use inflation, but prefer the catheter Then we get distinct suppuration, inflation is perhaps not the best plan to pursue But we can not always tell in the incipient stage, where the diagnosis is not yet definite, where we have a moderate injection of the membrane, no distinct bulging no appearance of fluid in the cavity, but where the individual has pain, and more or less rise of temperature whether the disease is going to lead to suppuration and perforation of the membrane or not In such instances inflation by the catheter, followed by carbolated glycerin will occasionally arrest further symptoms It will terminate that form which would not have proceeded to suppuration, but would have given the patient trouble for a few more days When the membrane is thoroughly injected and bulging, and the persistence of the symptoms has left no doubt that suppuration is taking place, we can not improve upon the treatment that the essayist suggests Here inflation of any kind affords only temporary relief, and I am inclined to agree with him on theoretic grounds, it is true, but on grounds that can not be utterly disputed that inflation may increase the liability to mixed infection and thus prolong the disease The essence of the entire treatment, after the diagnosis has been made is absolute rest and drainage Paracentesis has its well defined indications Perhaps the brevity of the paper did not permit the Doctor to give all of these indications The opening once established, there is no particular benefit to be derived by forcing fluid out by pressure through the Politzer bag or catheter The sticky fluid Dr Wilder speaks of occurs rather in the chronic form than in the acute otitis In the acute cases drainage with gauze is sufficient I have always feared that the gauze such as we purchase in stores is not absolutely sterile We have no guarantee against the entrance of putrefactive germs from the outside I hence saturate the gauze with boric acid powder before using it, and I do not change the gauze any more than I can possibly help I pack the cavity as densely as possible, allow the fluid to drain to the surface, where it partly evaporates, and keep the dressing in place as long as I can Since following this method I have seen most of the cases run a milder and less protracted course than in my former experience

Dr Wm L Ballenger—For fear that I may have been misunderstood in one of my statements, I will say that I do not oppose paracentesis in these cases, but I should try other methods such as I first suggested I understood Dr Pierce to say that he almost always resorts to paracentesis as a primary treatment It was his universal practice of doing this that I objected to

Dr Norval H Pierce—Realizing that my paper was somewhat radical, I was prepared for a warm opposition I do not think there is anything left for me to say except to assure the Fellows of the Academy that Dr Dickerman and myself are not in collusion He, together with Dr Gradle, has said about everything that I could say As regards Politzerization, I would like to ask what the gentlemen expect to bring about by it? What is their object in Politzerization?

Dr Wm H Wilder—I do not know who is expected to answer Dr Pierce's question as to what is the object of Politzerization One great advantage in these cases is the reestablishing of a connection between the middle ear and the pharynx that normally exists If you can open the tube, sometimes the fluid will flow back into the pharynx, and the entire trouble will disappear at once This is a point that Politzer himself advances After paracentesis the exudate, which is sometimes quite thick, will not flow out so readily by ordinary drainage as it will if you force it out by means of a current of air forced into the Eustachian tube by inflation with a Politzer bag or better, by means of the introduction of the Eustachian catheter I am inclined to think that more cases contain sticky mucus than Dr Gradle supposes Such cases are in one sense chronic, in which there has been an acute exacerbation of the disease, but we shall get rid of the exudate more promptly if we use insufflation than we should without it I do not see why we should discard a remedy which has proven useful, simply on the hypothetic ground that we are going to introduce more germs from the throat into a cavity that has already shown itself to be septic

Dr Wm L Ballenger—I think there are two other indications for Politzerization One is that you thereby introduce into the tympanic cavity oxygen, which is a very good therapeutic measure, and another is that you induce pressure You increase pressure in the middle ear which relieves the congestion Some time ago Dr Futterer read a paper upon the subject of exudative pleurisy in which I believe his treatment was pneumonic pressure to prevent the exudation We can prevent the rapid exudation or suppuration in acute otitis by 1 increasing the air pressure, 2 by introducing oxygen, and 3, by cleaning out the cavity as Dr Wilder has suggested I consider these three good reasons for using Politzerization As to paracentesis, there many be decided indications for it in acute otitis media These indications are when you have reason to suspect the fluid in the cavity is purulent, when you can see the bulging of the membrana tympani Cases of acute otitis media exist without a purulent condition being demonstrable Our standard textbooks, such as Politzer, divides acute otitis media into suppurating and non suppurating forms In acute suppurative otitis media I should not hesitate to recommend paracentesis In the simple form the tympanic cavity is not filled with pus and I should condemn this procedure except as a last resort to relieve the intense pain which can not be relieved by any other means Where one is pursuing a line of study as to what would constitute the best therapeutic measures he is apt to forget that the system has powers of recuperation independent of any extraneous therapeutic aid If the membrana tympani is retracted the indications are to open the Eustachian tube If it is bulging with pressure of pus from within the indications are for paracentesis There should never be any relaxation of effort to open the Eustachian tube in any case As I have said before, this can best be done by giving attention to the general catarrhal condition of the naso pharyngeal membrane and to other morbid process as post-nasal adenoids c

Dr Norval H Pierce—As regards Politzerization, our establishment of the permeability of the Eustachian tube can not aid in drainage of the tympanic cavity to any large degree, because we know the tube empties at the top of the cavity, it goes in at the roof just below the attic, and the larger part of the space is below the orifice of the Eustachian tube Politzerization is done for the purpose of reestablishing atmospheric pressure in the middle ear That is one reason for which Politzer devised this procedure when he introduced it to the medical profession We know that when the Eustachian tube is closed for any length of time the atmospheric pressure in the tympanic cavity sinks This is probably due to absorption by the capillaries of the mucous membrane of the oxygen from the air A partial vacuum is produced in this way, which is exerted as suction upon the capillaries, producing dilatation of them There is a sogginess of the mucous membrane from the fluid portions of the blood extruding from the vessel walls, and later a diapedesis of the cellular elements This condition may not be connected with true inflammation We believe that by paracentesis we reestablish the atmospheric pressure just as quickly as by Politzerization In other words, paracentesis accomplishes just what Politzerization does without the dangers My results during the past-two years in acute otitis media, whether it be more or less septic, and they all are, has warranted me in believing that this is the true and only mode of treatment The majority of cases have been cured within the first fortnight, and this can hardly be said of any other mode of treatment, taken as a whole There are many points touched upon in the discussion which we dealt with in the body of the paper, if I took up your time with these I would only repeat myself

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ETHER AND CHLOROFORM

Read before the Mississippi Valley Medical Society at St Paul
Minn Sept 18 1896

BY W S CALDWELL, M D

Fellow of the British Gynecological Society Membre l Association
Francaise de Chirurgie the American Medical Association the
Mississippi Valley Medical Society the National Associ
ation of Railway Surgeons the Illinois State
Medical Society Surgeon to St Francis
Hospital etc
FREEPORT ILL

I am just now entering upon my fifth decade as a practitioner of medicine, and though it is a humiliating reflection, yet it is a fact, that what I learned of therapeutics during one of these epochs, I had to unlearn in the next, and that with all my delving among the resources of the materia medica, I can now count upon the fingers of both hands nearly all the remedial agents that have stood with me the test of forty years

Among the few ideas, the few firm convictions that have become thoroughly implanted in my mind in the use of drugs, the superiority of ether as an anesthetic has become with me a confession of faith, firmly rooted and immovably fixed

It is now over thirty years since I made my first professional tour of Europe, and since then I have repeated the journey four times, and among the changes I have noticed at each visit, especially in Great Britain, is the more general use of ether as an anesthetic

Thirty years ago chloroform was in general use, while during my visit in 1893, I do not remember to have seen this drug used at all to produce general anesthesia in the adult, anywhere on the British Isles

These observations excited my pride, exalted my patriotism, for I was proud of the fact that ether, as an anesthetic, was an American discovery, and that conservative Europe was gradually adopting this agent, and discontinuing the use of the more dangerous one that had had its birth on the other side of the Atlantic

When men tell me that chloroform, if properly given [illegible] saf[illegible] [illegible]esthetic, [illegible] I wit[illegible] [illegible]hudder the deat[illegible] [illegible] r [illegible] ti [illegible]re being operated on by the great lights in surgery in Paris, Vienna and Berlin; on the other hand, I have never seen a single patient die on the table while ether was being administered as an anesthetic.

Imbued with these convictions, sustained by an extended observation, you may imagine my surprise and consternation when last spring, at the meeting of the American Association of Railway Surgeons at St. Louis, while the subject of the merits of chloroform and ether were being discussed, a vote was taken as to the preferences of that body for these two drugs, and 105 of those present advocated the use of chloroform, while only 16 were on the side of ether.

Like many another fanatic, I in my enthusiasm imagined I had a mission, and that mission was to buckle on my armor and, like the old Crusader, preach and combat with all the earnestness I possess in favor of my pet anesthetic.

It is this conviction that has actuated me to read this paper before this Society to-day. I shall not bore you, however, with a history of anesthesia, nor recount to you all the agents that have been used for this purpose from the days of Hippocrates to the time when Morton of Boston and Simpson of Edinburgh discovered the use of these two agents that are now almost universally used as anesthetics but shall proceed to discuss the merits of these two great champions, chloroform and ether.

Neither will I worry you with figures gathered from a vast variety of sources, and compiled by a large number of authorities, to prove to you that ether is a safer anesthetic than chloroform. Statistics, though often misleading, when they all point in one direction and all verify the same fact, are certainly worthy of some credence.

Now, though these figures vary somewhat, as compiled by different men, taking them on a general average, they prove chloroform five times as dangerous an agent for general anesthetic purposes as ether.

Another point I wish to make in favor of ether, is that our mortality reports showing the number of patients killed by chloroform and ether, are compiled from the statistics kept by large hospitals in the main, where anesthetics are most skilfully given.

Now, as nearly all of the advocates of chloroform admit that it requires more skill in its administration, I believe if all the figures could be gathered giving the true number of accidents that have occurred from chloroform, given by everybody, and under all circumstances, that the advantages of ether as an anesthetic would not only be a relation of 5 to 1 in favor of ether, but a relation of 10 to 1, in other words, chloroform being the more dangerous agent, requires more consummate skill in its administration, and as that skill is not possessed, in my opinion, by one physician in one hundred, they should use that anesthetic which, though bunglingly given, is not likely to result in the death of the patient.

I sent out last August over two hundred circulars, addressed to the surgeons of the United States north of Baltimore and St. Louis, and including those two cities, asking a reply to the following questions:

1. Do you generally use ether or chloroform in your practice as an anesthetic agent?
2. State briefly your reasons for preferring the one or the other.
3. How many deaths have you had in your practice from chloroform? From ether?
4. How many deaths do you know of that have occurred in the practice of other surgeons from chloroform? From ether?

I find my replies as sectional as politics, nearly every advocate of chloroform was west of Buffalo. Chicago was about equally divided between chloroform and ether; the further west I got my replies from, the more generally did the writers use chloroform. This was another blow to my pride, for I always had a conviction that the West was the most progressive portion of our progressive country. St. Louis is three-fourths chloroform. I only sent my circulars to the homeopaths connected with the large colleges and hospitals, and the replies I got were all in favor of ether. New York, Philadelphia and Boston use ether exclusively, according to the replies sent me, except in a few instances where the surgeon began the anesthesia with chloroform and then followed it with ether.

The wide-spread use of chloroform in the West will, I suppose, account for the vote in its favor at the St. Louis meeting of railroad surgeons, where, as I stated before, chloroform had 105 advocates and ether only 16. Of those who have answered my questions, 60 per cent. use ether, 25 per cent. use chloroform, and 15 per cent. use various mixtures of ether and chloroform, mostly the A. C. E. mixture.

My correspondents reported 127 deaths from anesthesia, that they had had in their own practice, or known in the practice of others. Of this number, 15 were from ether and 112 from chloroform.

Most of the chloroformists who answered me lay great stress upon the fact that the remedy must be given with *great care*. Their cautious language would seem to show that most of them were afraid of the remedy themselves. They exact *trained* and *skilled* men in its administration, an amount of skill, in fact, which few of us possess.

Prof. Roswell Park of Buffalo, the only advocate of chloroform in the East, when he answered my questions said, "I believe chloroform equally as safe as ether in *proper hands*, with *proper precautions*, and it is otherwise preferable." He says he has lost one patient on the table from chloroform, and knows of three or four others that have died in the practice of other surgeons, from chloroform. He says: "Ether does not kill as many on the table, but many more afterward, because of various complications, hence my preference for chloroform."

Dr. J. B. Murphy of Chicago says: "Chloroform is safer, though the operation requires *more care* and *skill* in its administration."

Dr. McArthur of Chicago, though an advocate of chloroform, ends his communication to me in these words: "There is no doubt that ether is a safer agent than chloroform; it is folly to deny this in the face of the enormous statistics," and yet he says, "in *careful hands* chloroform can be used with impunity where no contraindications exist."

One of the most distinguished surgeons of Kansas City and a warm advocate of chloroform says: "The agent is *safer* in *skilled hands*, but the trouble is, the chloroformer watches the pulse, and neglects the respiration, while the danger always approaches through the function of the lungs." He has never had a death in his practice. His teachings, however, according to the latest investigations on the subject, are fallacious, misleading and dangerous, for an analysis of 384 deaths from chloroform tabulated by the London *Lancet* Commission shows that in 227 of these cases, the pulse failed entirely before the cessation of respiration In 77 cases cardiac action and respiration ceased simultaneously, and in only 80 cases did the respiration stop before the heart While the venerable Kansas City surgeon's rules hold good in the main, in the administration of ether, they are not applicable when applied to chloroform In fact, anyone who gives an anesthetic, whether ether or chloroform, and does not watch both the heart and the respiration, is certainly an unfit person to act as an anesthetizer

Bearing on this point, Alphonz Guerin read a paper before a French surgical association in 1894, showing the great danger of chloroform as an anesthetic, though he says the experiments of Claude Bernard and Paul Bert, as well as the Hyderabad Commission demonstrate that death usually approaches by way of respiration This eminent surgeon says that in a certain number of cases, chloroform inhaled, was followed by a paralysis of the heart's action, and that the patient was beyond all hope of recovery at the moment the first signs of danger were observed

Dr Montgomery of Chicage prefers chloroform on account of the time saved, and the less nausea following its use

Dr Bouffleur of Chicago, in his answer to my circular, says he gives chloroform twice as often as ether, because it is less voluminous, easier to administer and less disagreeable in its effects, and that in properly selected cases, and if *properly administered*, it is equally safe The Doctor, however, in his article, "Anesthetics and Anesthesia" in the Supplement to Ashhurst's Surgery, says "Ether should be preferred to chloroform unless the anesthetist is *skilled* in the use of the latter" Further on in his letter to me he says that, generally speaking, ether is four or five times safer than chloroform This further demonstrates my position that, as a skilled anesthetizer is not generally obtainable, we should use that agent which, even in unskilled hands, is not likely to result in the death of our patient

Dr Keeler, chief assistant in Bardeleben's surgical service in the Charity Hospital in Berlin, stated to me that statistics showed that the fatal cases from the use of chloroform in that institution for the last twenty years, occurred generally in the hands of new men, who came on in their regular turn The Doctor told me nearly every new man had to kill a case or two before he could get his hand in

The English surgeon is, in my opinion, the most careful of the life of the patient he is operating on, of any man living, and in the large hospitals they employ a professional anesthetizer, he generally begins his anesthetic with the nitrous oxid gas, and follows that with ether In conversation on this subject with a noted surgeon of Guy's Hospital, he told me that only in an emergency would he trust even himself to give an anesthetic

It would make my paper far too long were I to quote all the reasons given by advocates of chloroform for their preferences for that drug, any one, however, who will carefully read over all the answers I have received, will come to the conclusion that surgeons generally give chloroform rather than ether, simply because it is more convenient and easier to give, and requires nothing in the way of an appliance for its administration However, chloroformists base their preferences for this drug, in the main, upon the following grounds 1, because it acts more quickly 2, it is more pleasant to the patient, 3, it produces less nausea, 4, it is more safe to use where you have to have an artificial light, 5, because its after-effects are less injurious

As to the first of these objections, that it is an agent that acts more quickly, the objection in my opinion is not well founded Since I have had in view the writing of this paper, I have begun the anesthesia with my patients at St Francis Hospital myself, and the time required for perfect anesthesia has been from two and one half to seven minutes and the average time is four and one half minutes I use the appliance I show you, which I believe was first brought out some seven years ago by Dr Kocher of Zurich, and which I first saw most satisfactorily used in the surgical service of one of the hospitals in Dresden You will see by the construction of the mask that it fits over the face rather loosely but to make it more air tight I throw a towel over the whole, and tell the patient to breathe fully and rapidly, and gain his confidence by telling him he will feel a choking sensation at first, but that it will soon pass away I use only Squibb's ether in 100 drachm cans and I never depend upon the remainder of a can that has been once opened I have used extensively the Clover and Ormsby inhalers and while the former is more economical as far as the quantity of ether used is concerned, it takes longer to anesthetize your patient and is not as satisfactory as the instrument I show you

As to the second point urged in favor of chloroform, that it is more pleasant to the patient, I do not believe it should have the least weight, when its greater danger is considered

As to the third objection, the assertion that ether causes more persistent vomiting, is absolutely untrue Immediately on waking from ether anesthesia the patient is more likely to regurgitate a few spoonsful of mucus from his throat a secretion which ether has a tendency to increase, but as far as the persistent vomiting that occurs in the next few hours after the anesthetic is concerned, such symptoms are much more likely to follow chloroform than ether Hewitt in his work on anesthetics sustains me in this position I carried a renal calculus for fifty years, up to a year ago, when it was removed, and during that time I took an anesthetic more than one hundred times, and when I took chloroform I vomited usually more or less for the next twenty-four hours, while in the case of ether nausea ceased in a short time

The most flimsy excuse offered me for the use of chloroform is that it is safer to use with artificial light Why not then restrict its use to cases operated on at night, and not jeopardize the lives of twenty patients operated on in daylight, because one operated on by night would be injured, and those in attendance, by the vapor from ether taking fire from a gas jet or a kerosene lamp

The indictment against ether on account of the deleterious secondary effects upon the patients probably has slight foundation, but has been enormously magnified by that careless class of surgeons who use chloroform on account of its convenience and want an excuse for their, in my opinion, inexcusable practice If the patient is suffering from bronchial irritation, ether may have a tendency to increase this morbid condition, at least temporarily As to the secondary pneumonia that seems to be such a *bête noire* with the chloroformists, it is a condition that may follow a suppurative process, whether an anesthetic be used or not, and any anesthetic, whether chloroform or ether, might be followed by this complication Degenerative and inflammatory processes in any of the organs of the body are the result of lowered blood pressure produced by the drug given, and the consequent formation of thrombi in the substances of these organs, and I claim that organic changes, whether of the kidneys, lungs, or any other of the great vital organs are as likely to follow the use of chloroform as ether To sustain me in this position, allow me to quote from the twenty-seventh volume of the *Archiv für klinische Chirurgie*, Dr Konrad Budinger, of Billroth's Clinic, "Ueber Laehmungen nach Chloroform Narkosen " In this article Budinger says we may have paralyses following anesthesia, caused by thrombi in the nervous centers, that a partial arrest of the circulation in any and all of the organs may lead to later degenerative changes in the heart, kidneys, liver, etc

However, most of my correspondents who object to ether base such objections on a general indictment, without specifying their charges

My hearers are not to understand that I am taking the position that chloroform has no place as an anesthetic I am in the habit myself of giving it to small children whose hearts are especially strong as compared to the adult, and women in childbed It was formerly taught that there was no danger in this remedy in this latter class of patients, but later statistics have shown that at least a dozen women are on record as having died during accouchement from the effects of this drug I am willing to admit that where there is any special irritation about the air passages, ether may have a tendency to increase this, while chloroform may have a tendency to allay it

I operated on a case last month that will illustrate the superiority of chloroform in exceptional cases It was a case of hip joint trouble in a young man 20 years old The night before I operated on him he had a slight hemorrhage of the lungs, was coughing some in the morning on which I operated I tried ether, but had to resort to chloroform, as the former seemed to increase his disposition to cough, but as my patient was very weak, I only partially anesthetized him, so much was I in fear of the anesthetic I was using

Several of my correspondents gave me specific rules as to how I should give chloroform, that it should be given drop by drop On the other hand, Prof St Germain, of the Children's Hospital in Paris, who has probably anesthetized many more children than any man to whom I have written, says that it should be given rapidly and the patient brought under its influence within the fraction of a minute, for if you give it gradually, and any untoward symptoms develop themselves, the patient is so surcharged with the poison you will be unable to resuscitate it But I only give this upon the authority of one of the most eminent surgeons of Europe, and do not personally endorse the views here expressed

Coming now to a review of the answers I got from those who favor ether as an anesthetic

Prof Nicholas Sands says, "I always give ether except in cases of Bright's disease and in children "

The venerable Prof T Gaylord Thomas of New York, in his reply to me, says, "Ether, ether, ether, a practice of forty years has taught me that ether is safe and effectual and that chloroform is attended with great danger I have had no deaths from chloroform, but have spent many a *mauvais quart d'heure* in resuscitating a patient at the point of death from chloroform "

Prof Thomas K Morton of Philadelphia says, "Ether is a great deal safer and I always give it "

Dr O P Pfifer says, "I always use ether, never chloroform, beause it is ten times safer "

Dr Edebohls of New York says, "I use ether, for one reason that the physicians in this country do not know how to give chloroform "

Dr J C DaCosta of Philadelphia says, "I give ether because it is vastly safer, and I believe deaths from chloroform are twelve times as frequent as deaths from ether In ether you have some warning of approaching danger, while chloroform is apt to kill without any previous notice "

Prof C B Penrose of Philadelphia, writes me "I always use ether for I believe the mortality of ether is very much less than that of chloroform I believe, however, the danger from ether is under-estimated. It is usually administered before a prolonged operation by the most inexperienced physician present, and I think many more would survive prolonged operations if the anesthetic was administered by a man of experience I would prefer the inexperienced man for an assistant and the most experienced man for the anesthetizer, if I was obliged to choose I believe that deaths sometimes occur twenty-four or forty-eight hours after an operation, which have been induced by an improper administration of the anesthetic "

In my circular addressed to Prof Wood of Philadelphia, beside the questions before mentioned, I added " I shall take the position in my paper that the after-effects of ether are no worse than chloroform, except perhaps where there is some irritation of the air passages Will you sustain me in this view?" He says, " I have always used ether except in a few well defined classes of patients, for which the use of chloroform is indicated in spite of its increased danger " In stating his reasons for preferring ether, he says, " for the safety of the patient Only those who are ignorant of the greater danger connected with the use of chloroform or who are indifferent to the safety of the patient, habitually use the stronger anesthetic, and it is only excusable on the battlefield, and the exceptions before named He who has kept himself informed on the subject through the London *Lancet* or the *British Medical Journal*, can not fail to note the great difference between the safety of the two drugs The claim that the after-effects of ether are worse than chloroform is a mere subterfuge to which careless surgeons resort, as a shelter for their indifference to life "

Dr A H Cordier, says, " Because it is safer and has no drawbacks, not also found from the use of chloroform Ether anesthesia can be induced in four minutes in skilled hands, and that without a struggle They vomit less and have less shock after ether I have not seen any of the bad results on the kidneys that some claim to follow ether, and I do not believe ether will produce these results "

Dr B F Crummer of Omaha, says, " I use ether in surgical cases for adults My opinion is that surgeons who constantly use chloroform do so because it is convenient, and because they have had the good fortune to not lose a case A man may drink alcohol all his life and live to be 100 years old, but that does not alter the well known fact that the use of alcohol is injurious and dangerous I believe that men who are in favor of chloroform, reason about as does the man who drinks alcohol, hoping that lightning won't strike him "

Dr Helmuth, an eminent homeopathic surgeon of New York says, "I use ether because the heart may be paralyzed by chloroform, but will not be by ether Ether produces no alarming syncope, ether stimulates the heart, chloroform depresses and paralyzes it "

Dr D W Graham of Chicago, says, " I always give ether unless there is some special reason for selecting chloroform I have seen some three or four deaths following ether from pneumonia or bronchial pneumonia, that might be ascribed to the drug, but I have seen the same following the use of chloroform " "The majority of men when asked why they use chloroform instead of ether, simply reply 'they prefer it,' not claiming that it is safer for the patient I have many times asked this question in recent years, and find the choice is often made as a matter of convenience, rather than the safety of the patient "

Prof D A K Steele of Chicago, says, "I use ether because it is safer than chloroform I have had two deaths from chloroform and none from ether I have known fifteen or twenty deaths in the practice of others from chloroform and not one from ether "

Prof W W Keene of Philadelphia, says, "I use ether because of its greater safety to the patient, which in my opinion should outweigh all fancied or real objections to the drug "

I shall not discuss the use of the A C E mixtures, of which as I before remarked, nearly 15 per cent of my answers advocate the use I have always looked upon these mixtures as unscientific, as you never know just what you are giving on account of the different volatility of the different agents of which it is composed, and as the rules for giving chloroform and those for giving ether are radically different, I can not conceive anything but confusion where they are compounded In the language of Dr A C Wood, 'All these mixtures are in my opinion, more dangerous than the individual drugs of which they are composed, and their use should be positively eschewed "

It would give me great pleasure to quote to the society answers I have received from many other eminent surgeons, but as the length of my paper has already reached the limit which I am allowed, I must bring the same to a close, by thanking the Society for their kind attention and courtesy in demeanor toward me

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LACHRYMAL DISEASE

BY J H McCASSY, M A , M D

DAYTON OHIO

Under the inappropriate heading of "Diseases of the Lachrymal Glands," Dr H S Bell of Kearney, Neb , contributes a very valuable article on lachrymal diseases in the JOURNAL, June 13, 1896

Unfortunately, the Doctor at once deserts the title of his article, but paid his addresses to diseases of the lachrymal passages

I quote the following from his article

"It is refreshing to find such a unanimity of opinion as to the causation of these lachrymo nasal affections It is fully agreed that they have their starting place in sub acute or chronic coryza In fact, chronic rhinitis is said to be not only the cause of all the affections of the lachrymal ducts, but to be the prolific source of most all the inflammations of the ocular and palpebral conjunctiva The consensus of opinion is overwhelming that lachrymal and ophthalmic diseases have their origin in catarrhal inflammations of the nasal turbinals "

The experience of the writer does not fully support such sweeping statements

The mucous membrane of the nares and the turbinals have a place in the animal economy and have definite physiologic functions to perform Nature constructed them in accordance with the requirements of their office They are as perfect in their arrangements and in the fulfillment of their functions as any other part of the human anatomy Would it not be more reasonable to attribute the prevalence of nasal, lachrymal and ophthalmic diseases to constitutional taints, such as scrofula or syphilis?

Cause —From a careful investigation of the causation of stricture of the lachrymal passages I think that about 50 per cent of these cases have their origin in hypertrophy of the nasal mucous membrane, especially that of the inferior turbinals, the exit of the tear duct being in the inferior meatus Catarrhal, follicular or trachomatous disease of the conjunctiva comes second in the causation of this malady Local periostitis at the nasal outlet of the canal is a frequent starting point for bony strictures

Pathology —Strictures of the lachrymal passages are of three varieties, viz , mucous, fibrous and bony Mucous strictures are formed by the coming in close apposition of the two inflamed surfaces of the mucous membrane denuded of epithelial cells, firm union resulting If the inflammation be continued long, and the outer fibrous layers of the duct be implicated, fibrous strictures are produced If the inflammatory process be extended to the periosteum, bony strictures will result The usual seat of these strictures will be found in the nasal end of the canal, especially just below the sac, or at the junction of the canaliculus with the sac, or in the canaliculus

Treatment —In order to cure the disease it is necessary to produce absorption of the stricture It is only the very simple cases that a probe passed every few days and left *in situ* for ten minutes or so, will effect a cure In the more difficult cases this treatment is inadequate to produce absorption of hypertrophied tissue or fibrous bands, and fails to cure

The following method has been successful in my hands

I slit up the canaliculus with a Weber's or Bowman's probe-pointed canaliculus knife and cut the stricture in two or three directions with Stilling's knife Blood coming from the naris will be assurance that the stricture has been divided A No 6 to 8 Ayers' or Bowman's probe is then passed, the canal washed out, and a "C"[1] silver canulated style dropped in The head of the canula will occupy the interior of the sac and remain invisible and quiescent for years I usually take the precaution to have a thread cut in the upper end of the lumen of the canula to correspond with the thread cut on a probe of steel or silver wire, which may, when desired, be screwed into the canula as a means of extracting it Before cutting the thread on the probe about three-eighths to one-half an inch of the end should be reduced to about one-half its regular diameter This small end of the probe will enter the canula more readily and facilitate the screwing of the latter into the former

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[1] The style "C" referred to is sho[illegible] Max W[illegible]her s catalogue but is [illegible] in Crocker s [illegible] Mo[illegible]s catalogues

The canula may be left *in situ* indefinitely A few granulations at the upper end of the canal are the complications observed, but these will usually disappear on being touched with a saturated solution of chromic acid on a cotton carrier

In operating, the upper canaliculus is to be preferred, because it is more accessible, easier kept clean and less liable to irritation At present I have eight patients wearing canulated styles In two cases the styles have not been disturbed for six months, the patients experionce no trouble and prefer to wear them rather than run the risk of removing them

During the first few days most patients will be conscious of the presence of the style in the lachrymal canal, but they soon learn to disregard it

The canula left *in situ* for two or three months will usually suffice to produce absorption of the stricture but should there be a return of the trouble, the canula may be replaced for a few weeks or months longer

Yesterday I operated on a man 38 years of age, and today upon a gentleman 64 years of age for stricture of the nasal duct and inserted styles The latter patient has had a complication of ectropion and symblepharon of the left eye for twenty years I feel assured that recovery will take place

The presence of a style does not prevent our injecting antiseptic or astringent solutions through the canal The shape of the canulated style used by me conforms to the anatomy of the parts perfectly I think that any bills or protuberances on the style would be a source of irritation Judging from a description of the mechanism of Dr Taylor's tubes, I am of the opinion that they would cause irritation

Assuming that the short process (three-eighths of an inch) is designed to occupy the canaliculus, and the part below the angle to be in the lachrymal canal below the sac the former would necessarily be exposed in cases where the canaliculus had been slit up preparatory to cutting the stricture in the nasal duct The most frequent seat of stricture in obstinate cases is below the sac Our efforts to cure will be commensurate with our success in securing drainage through this region Besides stricture below, the sac can not be cut until the canaliculus is slit up In these cases the short process of Dr Taylor's tubes would be exposed, and retard healing of the canaliculus around the upper and lower blades of the duck-bill snout of the style Unless the upper end of the style is in sight or can be reached and grasped with a fine forceps it would be difficult to extract should occasion require it to be done

32 West Fifth Street

A CASE OF TETANUS TREATED WITH ANTITETANIC SERUM, RECOVERY

BY G E MUNS, M D

MONTGOMERY CITY, MO

The patient was a little girl, age 5, healthy, history good up to this attack About ten days before I was called, patient had received an injury of the left thumb from stroke of hammer in cracking nuts The nail was badly bruised, flesh at base of nail was lacerated to some extent and the nail separated from thumb at its base The wound healed nicely under local treatment About ten or twelve days after the injury the parents noticed a change in the child's disposition She became irritable, would not play, slept badly, ate little and required constant attention In a day or two these symptoms were followed by stiffness of the spinal muscles and of the muscles of the upper and lower extremities The muscles of the face were so contracted as to give the child a peculiar expression When I saw the patient for the first time the symptoms were very much aggravated Tonic spasms of the muscles of the spine and of the upper and lower extremities were almost constant The slightest effort to exercise, eat, drink or perform any muscular labor was accompanied with severe tetanic spasms The risus sardonicus so common in such cases was a very marked and constant feature The jaws could not be opened at any time more than half an inch

Diagnosis was easily made and the case treated for a few days by the ordinary methods of the text-books, but there was no improvement Obtaining through the Kansas City branch of Parke, Davis & Co a sufficient quantity of their tetanus antitoxin, treatment was begun two weeks after the first manifestation of the characteristic symptoms We gave the child five doses of two drachms each hypodermatically about every eight hours No other treatment was used We nourished the patient carefully The symptoms abated visibly in twenty-four hours The muscular spasms became less and less severe and frequent, until they disappeared

In this case the remedy seemed to act promptly and favorably, and it may be fairly credited with the favorable result In the treatment of the case, Dr W B Adams of Montgomery City, was associated with me, and bears out my judgment of the remedy

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SOCIETY PROCEEDINGS

Chicago Academy of Medicine

Regular meeting Nov 13, 1896

Dr Wm L Baum in the Chair

DISEASES OF THE NASAL ACCESSORY CAVITIES

Dr Henry Gradle spoke on this subject He said The importance of diseases of the nasal accessory tract is perhaps not fully recognized by the profession at large We have hitherto not fully understood how manifold may be the symptoms produced by these affections and how frequent is the involvement of these cavities in disease I have concluded to present some recent observations not generally known, as well as personal experience, and will give you no formal paper

As to the frequency of these troubles a most startling announcement was made by Fraenkel a year ago, namely, that in 146 unselected autopsies of cadavers as they came to the postmortem room at Hamburg, he found no less than 63 instances—that is to say about 40 per cent —in which there was involvement of one or more of the accessory cavities of the nose He found one cavity involved thirty seven times, two cavities eighteen times, three six times, four one time, and all six cavities (two frontal, two sphenoidal and two maxillary sinuses) one time In no instance did he find disease of the ethmoid sinus These were unselected autopsies Some of the diseases predisposed to inflammatory involvement of the sinuses, especially pneumonia and cerebro spinal meningitis, in which instances a very large percentage of sinus disease was present, more so than in the chronic forms of disease In peritonitis also a large number of instances were met with, several of them apparently due to the presence of the colon bacillus

In confirmation of these researches I may mention the work of Wolff, who found in twenty two cadavers of children, dead of diphtheria, maxillary sinus involvement in every instance and the sphenoidal sinus diseased in every instance in which it had been developed In fifteen it was undeveloped on account of age, while in seven cases in which it existed it was diseased The involvement was specified as catarrhal or diphtheritic, according to the character of the disease in the nasal cavity

Similarly, Harke found in 30 children dead of infectious dis cases of the air passages, like croup, diphtheria, measles, whooping cough and scarlet fever, suppuration of one or more cavities in all instances while 37 adults dead with acute infectious diseases there were 31 cases of sinus involvement Dmochowski, who searched only for disease of the antrum, found it in 28 instances in 152 unselected cases on autopsy

How does this information harmonize with our clinical knowledge? Fraenkel says his cadavers were all sent to the postmortem room without a clinical diagnosis of sinus involvement Until within the last year or two scarcely anything had been known about the symptomatology of acute diseases of the sinuses, and no one until within the past two or three years had any idea whatever as to the enormous frequency of acute disease of these cavities While some of the milder cases may perhaps be unrecognizable during life, on account of the very slight symptoms to which they give rise and on account of their transient nature, still a more serious involvement of the sinuses in the acute form can give rise to marked symptoms It is characterized essentially by pain, which is tolerably constant in the cases of acute inflammation of the maxillary and frontal sinuses In the cases of the former the pain had generally been diagnosed clinically a neuralgia of the fifth nerve In the case of the frontal sinus it is typical, over the supraorbital region and one side of the median line of the forehead, the supraorbital neuralgia

As to the pain produced by disease of the sphenoid and the ethmoid sinus in the acute form, we know practically nothing In all probability, however, many of the headaches and neuralgic pains occurring during acute diseases are in reality due to involvement of one or the other sinus in acute inflammatory action

Most of the acute troubles are transient and ultimately cease even without treatment It is rather questionable whether we are called upon to treat them actively as the treatment would necessarily be of a surgical nature Seeing that there is a spontaneous tendency of these acute affections toward recovery, we may possibly be able to assist this recovery by attention to the condition of the nose, particularly the removal of secretion by means of the nasal douche, with due regard for the dangers to the ear which the nasal douche may entail if carelessly used It is only when these cases are protracted and pass beyond a period of two or three weeks that we can expect them confidently to last until relieved by treatment, or perhaps relieved by change of climate

Of course, the bulk of clinical work pertains to chronic affections of the sinuses A chronic affection is observable to the patient by the discharge of pus to which it gives rise It is, however, a mistake to think that the discharge of pus must be so free as to call the patient's attention to it It is true in the case of the ethmoid and sphenoid sinuses, we depend entirely upon the discharge of pus and the visibility of its track from the orifice of the sinuses down into the nose, but in the case of the frontal and maxillary sinuses we often meet with instances where the purulent discharge is so slight as to be either ignored by the patient or denied, although when questioned closely we can generally ascertain that there has been some slight discharge present at times

How are we to recognize the existence of a purulent inflammation in such cases where the discharge is minimal? I will speak principally of the maxillary sinus because my experience pertains to that more than any other both because disease is more common in this sinus than in any other and because it is only recently that we have learned to recognize involvement of the other cavities

In the case of the antrum of Highmore, some value may be placed upon the results of transillumination It is, however, not an infallible method of diagnosis We may suspect empyema on account of relative opacity when it is really not due to the existence of pus but to the rudimentary condition of the sinus and the abnormal thickness of the osseous walls—at least, abnormal when compared with the other side Such a mistake has once occurred to me I think others have likewise called attention to the possibility of this error On the other hand, we can overlook empyema of the sinus if we place too much reliance upon the transillumination test, for in some cases the fluid in the antrum is not pus but serum and in other cases the discharge, is not copious enough to fill the entire cavity, but consists of a small quantity of thick pus lying in one of the recesses of the cavity and not at the bottom of the sinus I have several times seen instances where upon the evidence of the transillumination alone I would not have dared to puncture did not other symptoms point to the existence of maxillary trouble and found my efforts rewarded with definite results Absolute evidence can only be obtained by the puncture, which it is best to make through the alveolar process of the first molar tooth, or as close as possible to it

According to Zuckerkandl, in about one fourth of all skulls examined the sinus does not extend anterior to the first molar tooth, while in three quarters of the instances it extends to the second bicuspid, if not anteriorly to it

Ziem has suggested that in those cases in which we do not wish to sacrifice a sound tooth, we can enter through the palatal side of the alveolar process next to the first molar tooth The operation is nearly as easy as going through the socket of the tooth In one instance, however, I failed in reaching the sinus through this route On puncturing we can not always obtain definite evidence by aspiration for the reason that in some instances the disease is limited to one of the recesses of the maxillary sinus I have seen this happen twice, where the syringe would draw out no fluid, but where on irrigating I found a characteristic plug of decayed pus in the fluid as it flowed from the nostril It is necessary to cleanse the nostril first so as to make no error on account of pus coming from some other locality in the nose

What are the symptoms upon which we can rely? There are none that are absolutely characteristic, but there may be a great variety of them that are strongly suggestive Again I will refer essentially to the maxillary sinus, on account of my limited experience with the others The main symptoms most generally present are those of nasal irritation As a rule, we have to deal with relatively narrow noses where the antrum is involved in chronic trouble I say as a rule but that is not always so, because the disease may be of dental origin, though this is not common In the majority of cases where the disease is of a nasal origin, it would not have become chronic but for the reason that the nose is narrow Now, in a narrow nose any irritative process leads to occlusion or stuffiness, and this stuffiness may in some cases be the only symptom of suppuration going on in the antrum of Highmore Again, there is, as a rule, though not invariably, some diffuse catarrh of the nose, even of the pharynx, present, and this may extend into the bronchial tubes in the form of a temporary attack, or even a more or less persistent chronic bronchitis In those persons who are predisposed to nervous reflexes, who are neurotic, we may also get reflexes, such as cough, sneezing attacks and asthma I have personally seen an instance of asthma which occurred while under observation on evacuating the pus from the antrum

Beside extension of nasal disease and nasal irritation downward, we may also have extension into the ears Empyema of the maxillary sinus may lead to ear disease, just as much so as any other form of chronic nasal disease or anomaly, and as far as the ear lesions are recoverable, recovery will be favored in such cases by the prompt removal of the primary cause, that is, by the successful treatment of the antral disease

Disease of the antrum is likewise liable to lead to involvement of the eye Many cases complain simply of pains which may be interpreted as asthenopia, that is to say, more or less discomfort, like tingling, present most of the time, but exaggerated upon using the eyes Apart from this purely functional disturbance, there may occasionally be serious organic lesions of the eye as a sequence of disease of the maxillary sinus Ziem has called attention to this possibility The cases he presents are by no means convincing I have only seen two cases, which if not absolutely convincing, are at least suggestive of such a relationship One was a case of exudative chorio retinitis which had increased steadily for two weeks Upon examination the antrum of the same side was found filled with pus, presumably of recent (dental) origin The eye symptoms began to recede at once after opening and irrigating the antrum The other case was one of neuro retinitis which had increased for three months and remained stationary under my observation under the use of large doses of iodid of potassium I had no clear history of syphilis, I could get no definitive evidences of this disease, but I considered it the only thing to do namely, to work on the basis that it was of syphilitic origin I finally decided to puncture the antrum on account of one sided nasal discharge Transillumination in this case was not decisive On puncturing the antrum I found a plug of purulent mucus, and from that time on improvement began These are the only two instances in which organic lesions of the eye seemed to have followed disease of the maxillary sinus within my observation

Disease of the frontal sinus too may give rise to pain referred to the eye often, or to typical supraorbital neuralgia The pain may radiate, or it may be localized in the orbit by the patient

Whenever suppuration of any sinus is copious we often encounter a general disorder of health, furred tongue, more or less digestive disturbance, sometimes a decided loss of strength and even weight, probably due to absorption of pus in loco, or after swallowing

Finally, as to the dangers of these suppurative diseases They seem to have been rather overrated The number of instances where fatal complications occurred by extension into the brain, or by phlebitis or general septicemia, is really very small There are probably not more than two dozen cases on record in all of fatal results traceable to diseases of the sinuses Still even these two dozen cases, with perhaps a fair number of others, the origin of which was not recognized, make it imperative to keep in mind the possible serious nature of the disease which in many instances leads to abrasion of the bone and possibly a deeper involvement of the osseous structure It is probable that disease of the ethmoid sinus is the most dangerous on account of the immediate proximity of the ethmoid bone to the dura mater and cavernous sinus

As to treatment I have little to add My experience coincides with that of others The main object is to secure a permanent opening I think, however, I can say a few words with reference to drainage of the maxillary sinus Formerly, my results in disease of the maxillary sinus were anything but encouraging The symptoms whatever they were, were indeed relieved at once by opening the sinus and irrigating, but the patient did not get well I found the reason of my failures in the earlier cases was insufficient drainage, not because my opening was not sufficiently patent, but because I did not recognize the fact that the pus is so tenacious that it will not drain from the maxillary sinus My results within the last year and a half have been much better by not attempting continuous drainage, but by limiting myself to a puncture of the antrum through the alveolar process about 5 to 7 millimeters in size and using frequent irrigation, which the patient carries out at home from two to three times a day Since I have followed this plan and insisted upon the patient learning to irrigate himself, my results have been very much more satisfactory There are indeed cases where there are such extensive changes in the lining of the maxillary sinus, either by cysts or granulation tissue, or less frequently, polypous formations that a small opening through any of the walls is absolutely insufficient, and in such cases nothing can be done except to make a more extensive resection of the anterior wall, which affords complete relief, but which requires many months, if not years, before an ultimate cure will take place after thorough curetting of the entire lining of the maxillary sinus The majority however of those instances of empyema of the maxillary origin, which date back only some months, will heal in the course of six weeks to three months, if regular irrigation is practiced Even in long standing disease this plan—the simplest of all procedures—deserves a first trial and will often be found sufficient

Dr W X Sudduth—I am not familiar with the statistics that have been presented by Dr Gradle, but the first impression I get from them is that, from a practical standpoint, they are of little value My experience in the pathologic laboratory and autopsy room has taught me that in cases coming to the autopsy table nearly every cavity in the body presents, more or less, some evidence of inflammation, and I am not at all surprised that 46 per cent of the cases that go to autopsy, should present evidences of inflammation of the sinuses, because any disease that is fatal in its nature necessarily involves more or less the whole body

A statement made by the speaker that the maxillary sinus in a large per cent of the cases is not present anterior to the first molar tooth, is a surprise, for the antrum arises from the nasal cavity and must connect with it

Dr Gradle—I said in about one third of the cases In two thirds of them it is

Dr Sudduth—The difficulty in tapping the antrum, in all probability, lies in the fact that the trocar is not placed high enough, because any considerable difference in width of the alveolar process, would make it possible to miss the antrum If the trocar is introduced high enough to avoid the roots of the teeth, it will almost invariably tap the antrum in the vicinity of the first bicuspid tooth

Another point of which no mention was made was with reference to using a curved trocar in exploratory aspiration through the nasal membrane I do not think we are justified in depending upon transillumination in our diagnosis, as the speaker has said There are cases of an obscure nature where it is justifiable with a curved trocar to aspirate from the nasal side

The next point is with reference to the necessity of obtaining drainage Quite a number of years of experience in this line teaches me that the method of drainage advocated by the speaker in treating the antrum is the most unsuccessful of all, because the establishment of drainage in this way presents a source for constant infection by the saliva, and the majority of cases do not heal A chronic condition is set up that lasts for years by that method of treatment I have devised and used in my own practice a method of treating the antrum based upon that observation and after assuring myself of suppuration of the maxillary sinus, I use a circular trephine, going into the antrum as a rule above the first bicuspid tooth The outer plate is thin, from a sixteenth to an eighth of an inch in thickness The opening is very readily made, and then I make sure that the nasal orifice is patulous, introducing tepid soda solution and flooding out as much of the pus as I can into the nasal cavity, then introducing peroxid of hydrogen After the first dressing is selected, a soft rubber catheter of the same caliber as the trocar is used, inserting it into the antrum about an inch and a quarter, then ligating it to one or more of the teeth, furnishing the patient with a glass syringe to use the different tepid solutions himself The great trouble in making an opening into the mouth and allowing the patient to rinse it out himself is the inflammation that is kept up in the margins of the opening and the pain the patient has in using the syringe I speak from experience because I have tried this method of treatment in my own case I had infection of my right antrum from the nasal side, it was trephined in that way and I had to wash it out myself with syringe, and by allowing the opening in the mouth I got no healing but much pain from that method of treatment I thought I was conscientious in washing it out two or three times a day Then the plan now usually adopted was tried of introducing a tube, keeping the end of it plugged, simply using it as a means of allowing washing into the nasal cavity The discharge came out readily without trouble and as soon as this method was adopted my antrum began to get better, it healed, the tube was taken out and the antrum is now as comfortable as it ever was and has been for some years I have used this method in a number of cases in practice also

My experience with drainage into the mouth in these cases is very unsatisfactory, and this method is accountable for a great many cases of failure to heal Dr Garretson, who had an extensive practice along this line, stated in his oral surgery, that the antrum once opened never heals I was conversant with his method of practice, and it was a fact, according to his way of practicing, that the antrum seldom or never did heal My own has healed nicely and, as I have said, I have a great many cases in practice that I have handled in the same way

The close association between frontal, ethmoidal, sphenoidal and the antral sinuses is one the profession does not take sufficient cognizance of Where one is chronically involved, especially if the disease begins with nasal catarrh and involves the ethmoidal or sphenoidal sinus, the antrum is apt to be implicated also, and a great many cases of failure to treat antral affection successfully is by reason of the intimate connection of the sinuses above that are involved and discharge into the antrum By treating the other sinuses we succeed in curing the antral affection

I can not speak from experience as to the extent of the involvement of the ear in these affections, but it stands to reason that it should be more or less involved in chronic cases

Methods of differential diagnosis are also to be considered

The use of the electric light in my hands has given little or no result Dr Gradle brought out the point several times, especially in acute affections, that the fluid in the antrum is simply serum and does not in any way interfere with the passage of the light In a few cases the light is no good whatever In chronic affections, where the pus is thick, the light is of very little value Position has been one of the best means in my hands of making an absolute diagnosis, next to that of aspiration I resort to it before I resort to the aspirator Affections of the antrum are generally unilateral, seldom bilateral, and the location of the pain is one point to be depended upon, also by having the patient lie on the opposite side If the right antrum is affected I have them lie on the left side, and if there is a free discharge in that way and there is no discharge lying on the right side you have a good point of differential diagnosis Then you can adopt the method of drainage into the nose, allowing the pus to discharge through the natural opening This is the best way of effecting a cure

As Dr Gradle truly said, acute affections are best treated constitutionally rather than by surgical interference We are not justified in opening into the antrum, especially in cases where the disease is self limiting A great many of these cases will get well if treated constitutionally, except those of specific or tubercular origin These cases are hard to deal with, and can only be treated constitutionally

The prognosis in the treatment of antral affections is good, provided the right means of treatment is adopted Of course, for the ethmoidal sphenoidal and frontal sinuses the treatment is much more difficult, and the results are not so satisfactory I had a very interesting case some time ago involving the frontal, ethmoidal and antral sinuses, in which I opened into the frontal sinus and inserted a tube for the introduction of medicine, and began to wash out the pus through the frontal sinus just as I would the antrum with soda solution, then with peroxid of hydrogen, and following that with listerin, leaving a certain portion in the cavity to drain out naturally This was a chronic case and my success was marked in handling it The main point after making the diagnosis is the method of treatment, and above all things, do not make a large opening in the mouth to serve as a channel for infection from saliva

Dr **Frederic D Owsley**—The statistics of Frankel, recited by Dr Gradle, are very striking in demonstrating the frequency of diseases of these cavities The fact has impressed itself upon all rhinologists of late that the frequency of these diseases is much greater than was supposed a few years back For a number of years I, with many others, was inclined to scoff at the claims of Woakes in regard to the frequency of the occurrence of ethmoiditis, but in the past two years I have been surprised by the number of cases of diseases of these cells that have come under my observation I have never been able to demonstrate to my satisfaction the existence of that form of ethmoiditis which Woakes describes as necrosing ethmoiditis

I have found certain local conditions in diseases of the ethmoid and frontal sinuses of which I have noted no mention in the literature or discussions on the subject, and which I consider as pathognomonic of diseases of the accessory sinuses

In both the catarrhal and suppurative forms of inflammation of the frontal and ethmoid cells, I have found almost constantly present a circumscribed tumefaction or intumescence of the septum, located just below and in contact with the middle turbinated, which hides that body from view When this tumefaction is reduced by the application of cocain or pressed aside with a probe, you find in the simple catarrhal form an incrustation of the middle turbinated, and in the purulent form you see the pus oozing from under the end of the middle turbinated I have observed this intumescence of the septum only in those cases where the upper cells were affected, although it seems that it might in reason be expected to occur in disease of any of the cavities which open into the infundibulum, as it is probably caused by the continued irritating discharge against the septum at that point

In the treatment of diseases of the frontal sinus and ethmoidal cells, it has been my custom to establish free drainage by reducing the intumescence of the septum with the cautery, and by removing the anterior half of the middle turbinated, this procedure may, with proper cleansing, in time achieve a cure, but frequently it only gives relief from pain and distress caused by retention, a radical operation by way of the frontal sinus being the only way of effecting an absolute cure

In regard to diagnosis of diseases of the antrum I agree with the gentleman who preceded me, and place little confidence in translumination as a means of diagnosis In several cases where transillumination showed no characteristic differences, I have found pus in the cavity on aspirating I use for this purpose the long curved aspirating needle of Krause, which I introduce into the antrum through the middle meatus at the point of Zuckerkandl's fontanelles, which, as you know, are only separated from the nasal by mucous membrane

The locality of pain as a factor in diagnosis of diseases of the antrum I consider of deceptive and uncertain value In some cases it is local and confined to the side affected, but frequently it is general or situated away from the point of the disease In these cases I have frequently had the pain described as located back of the eyes or in the orbit

In reference to the operative procedures mentioned, I believe with Dr Sudduth that draining into the mouth is the least satisfactory way In my experience, I have never obtained good results by mouth drainage The operation I prefer for the purpose of establishing drainage in diseases of the antrum is that of suturing the cavity through the anterior part of the inferior meatus under the turbinated, by means of the drill or a large curved trocar, and into the opening insert a curved metal tube for the purpose of washing out the cavity and keeping the opening open The treatment of these diseases by any of the tested methods have in my hands been exceedingly unsatisfactory, for the reason that it has always required months of treatment, and sometimes years, without effecting a cure I believe that in quite a number of the acute cases immediate operative interference is imperative, the indications for which are severe pain, marked constitutional disturbances, fever and swelling of the face over the antrum In the chronic cases that do not succumb to prolonged and faithful treatment, I favor the radical operation of a large opening through the anterior wall of the antrum with the chisel and a thorough curetting of the interior of the antrum, and packing with gauze

Dr **Edward T Dickerman**—The subject under discussion is one in which I am extremely intererested, and the remarks made by Dr Gradle in regard to acute conditions of the antrum were of very great interest, showing how frequently in the acute exanthemata and also in pneumonia, the accessory sinuses are involved Right here we have the seed sown which in after years may develop into purulent or catarrhal condition of these parts

The essayist also referred in his remarks on the diagnosis of this condition to not being particularly in favor of transllumination My experience corroborates what the Doctor has said in regard to this point In some cases where there is a catarrhal condition of the frontal sinus that has existed for a long time we will get decided symptoms that is, on one side you will have the frontal sinus well illuminated, while on the other it is practically opaque In these cases, as a rule, you may depend upon transllumination, but in the antrum it is of no value practically I had expected to hear more in regard to the appearances of the middle meatus in diseases of the various sinuses If you recall your anatomy of the nose, the antrum of Highmore, the frontal sinus, and the anterior ethmoidal cells open into the middle meatus, the sphenoidal and posterior ethmoidal cells entering into the superior meatus Anteriorly, you have the opening of the frontal sinus into the infundibulum, posterior to this you have an opening into the ethmoidal cells, and below and behind you have the opening into the antrum of Highmore This is of extreme importance in the diagnosis of these conditions, as well as in the treatment The mucous membrane of the middle turbinate covers over the infundibulum and the processus uncinatus, and when you have an acute condition with edema, or an exudate, the orifices of these three sinuses are thoroughly occluded Then we begin to have symptoms of trouble in any one or all of these cavities If the condition has existed for weeks or months we have a thickening of the mucous membrane, we have the formation of granulation tissue or may have polypi and these conditions all tend toward the occlusion of the orifices in that way establishing a catarrhal or purulent condition which extends by continuity and by stasis into these cavities Another point that should be considered with reference to the diagnosis is that the processus uncinatus acts and constricts the trough, the trough being the infundibulum If you have a catarrhal condition of the ethmoidal cells, or a necrosis of the ethmoid, or if you have an empyema of the frontal sinus, the processus uncinatus can guide the pus through the hiatus semilunaris and deposit it in the antrum of Highmore, and the latter acts as nothing more than a reservoir for pus produced in the other cavities

In the diagnosis of these conditions the first thing to be considered in diagnosticating an inflammatory condition in the antrum is not only the use of translumination, but to go into the antrum through the natural orifice This can be accomplished in over 10 per cent of the cases If you have hypertrophy of the mucous membrane, polypi, or granulation tissue along the processus uncinatus, remove it It is not necessary to remove the anterior end of the middle turbinate By removing the hypertrophied tissue contracting down the mucous membrane, you are able with Hartman's syringe point to get into the antrum, to wash it out and irrigate thoroughly Very often you can make a diagnosis of the condition of the antrum in this way If you find either a catarrhal condition, or a muco purulent discharge from it, then operative procedures are to be considered Pathologic conditions of the frontal sinus can often be diagnosed through the natural opening and we believe this can be done in 50 per cent of the cases If the opening in the frontal sinus enters into the infundibulum high up you can enter that with a probe, and watching the probe as you withdraw it you will be able to see pus trickle down If that is not the case, you can enter the sinus with a curved syringe point and thoroughly wash out the cavity If you find the fluid mixed with pus, you are pretty sure of your diagnosis

(To be continued)

Chicago Pathological Society

Regular meeting October 12 1896

Dr **James B Herrick**, the President, in the Chair

Dr **Geo H Weaver** read a paper entitled "The Bacteriologic Contaminations and the Preservation of Vaccine Lymph Glycerin as a Bactericide" (Will appear next week)

Dr **Hugh T Patric** [illegible] e remarks on

ARTEFACTS IN THE [illegible] THE NERVOUS SYSTEM

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I wish to call attention this evening to a few things that might lead us to false conclusions in making a microscopic examination of the nervous system, and which might allow us to accept the false conclusions of others as found in their writings As my time is restricted, I shall limit the subject entirely to the examination of the spinal cord, and shall touch upon only a few of the principal artefacts found in such examinations By an artefact I mean an accidental artificial product Of course, the red carmin stain is strictly speaking, an artefact, but we understand what the red means, we cause it on purpose and do not class it as an artefact Some of these accidental productions are, I think, not entirely understood by some men who do microscopic work, but do not do a great deal of work on the nervous system, and I think attention ought to be called to this In justification of this assertion, I might mention a recent article which appears in what is perhaps, the best neurologic journal that we have, namely, the *Deutsche Zeitschrift fur Nervenheilkunde*, in which the author describes the microscopic appearances of the cord in a case of pernicious anemia From his findings the author attempts to overturn all pre established pathology of the changes which take place in the cord in pernicious anemia Judging from the description of the histologic changes, and from the one cut or illustration of the entire cord section, the lesions on which the author bases his difference of opinion from previous investigators are as palpable artefacts as can be produced Anyone acquainted with the subject would recognize the greater part of the pathologic findings as artificial products having no connection with disease There is a peculiarity in this unaccountable scientific blindness The author even alludes to a fissure which runs into the cavity, which he describes as a pathologic product, and says that this fissure may be due to injury of the cord in removing it He does not seem to think of the possibility that the entire pathologic finding in the gray matter might also be due to postmortem injury

One of the first things in the examination of the cord is artificial heterotopia, which means the malplacing of the various histologic elements A number of cases have been described as being due to congenital defect Great credit must be given to an American pathologist, Van Gieson of New York, who was the man to show that nearly all, if not all, of these cases are due to postmortem injury His conclusions and findings have never been disputed In these cases there are a number of deformities, several varieties of which I have set up under the microscope You will observe one section in which the posterior horn is missing, another section in which most of the anterior horn is missing, and two or three other cases in which there is marked deformity of the gray matter I would say that these artefacts are apt to affect particularly the gray matter, because it is less resistant, whereas the white matter may not show any results of injury at all While you may find marked microscopic changes, there may be nothing abnormal to be seen by the naked eye How are we to tell that a certain deformity is an artefact, that is not due to disease or to congenital malformation? In the first place, evidences of acute disease, or of acute inflammation, of proliferation of cells, of nuclei, certain vascular infiltrations, are absent In the second place, evidences of chronic disease, proliferation of neuroglia, the symmetrical disappearance of nerve fibers and a thickening of vessel walls are absent Next as to positive evidence of postmortem injury of the white matter of the cord When we make a cross section of the diseased or normal spinal cord we cut the fibers of the white matter transversely We have for each fiber the axis cylinder surrounded by the myeline sheath, and a cross section of the white matter means a collection of these, close together in normal cords, separated by neuroglia in sclerosis Of course, there are all sizes of fibers in the spinal cord In the case of an artefact, instead of having a symmetrical nicely cut cross section, the fibers may be strung out in strands, or they have a peculiar slanting appearance Instead of being round they are oval, showing that they have been cut in a slanting way In many instances a number of fibers loop around a vessel It is evidence that in the postmortem violence to the cord the vessel has been drawn athwart the less resistant nerve fibers, which have looped about it, like seaweed about a taut fish line Within the loop and, so to speak, behind the vessel is an area in which there is very apt to be a homogeneous substance, the nature of which I do not know It takes all stains poorly I have seen it repeatedly described as an exudate, or as a transudate, the result of various changes which never existed

Another thing is the so called rarefaction of white tissue in the cord, which practically does not exist antemortem There is scarcely such a thing as rarefaction due to disease I have set up a couple of slides illustrating this If you take a section in a case of postmortem deformity you are pretty sure to find so called rarefaction, and it means, in the first place, that the fibers do not stain well when torn Then the fibers instead of being close together are separated by large intervals which are not filled with neuroglia tissue or infiltrated cells This can scarcely be anything but an artefact These interspaces are irregular and the fibers themselves are irregular, but you can judge better what they are like by looking at the specimens

Another thing that is frequent as an artefact, and which is easily understood, is pulling out of the posterior root fibers in the cord, which make an apparent degeneration of the zone of Lissauer This zone has peculiar fibers, is important pathologically, and I have seen it described in various reports as degenerated, when there was no apparent reason for it The posterior root has been given a pull, say in removing the cord and as many of the root fibers enter close to and through Lissauer's zone, the fibers of the latter are disarranged and lacerated and consequently do not stain well

Another thing that is frequently described as degenerated is the subpial layer around the cord, the periphery of the anterolateral tract In the absence of meningitis, this is nearly always an artefact If the cord be exposed for a long time before putting it into the hardening fluid, this outer layer will suffer If the hardening fluid has not been good and the cord become partly decomposed, or if the sections are not properly handled, this area often changes, therefore it is called degenerated when the true evidences of degeneration do not exist

Speaking of poor staining, the sections do not always stain uniformly It may be impossible to say why One section lies upon another in some cases, or the sections are folded over, and consequently stain irregularly The resulting pale patches or streaks have been described as pathologic, when the only trouble was that the stain did not take well This is especially true of the carmin stain which is perhaps most generally used The Weigert stain, also much used, may give a black patch, which does not differentiate well, and may hence be called degenerated When the material has not been hardened well it is apt to stain irregularly and poorly, and hence false conclusions may be drawn

Again, rarefaction and vacuolation of nerve cells hardly ever exist Groups of pigment in ganglion cells, which are quite normal, do not take stains well and are called vacuoles and granules and various other pathologic things It takes a very successful stain of any kind to get the processes of ganglion cells well, and the disappearance of the processes is often attributed to some disease, when it is due to nothing but a poor stain I have set up but one example of this You will notice four or five cells in the field in which there is scarcely a process or a nucleus to be seen, and the cells also look granular It is simply a poor carmin stain, the result of imperfect hardening or the age of the specimen

In the article I have previously referred to there were cavities described in the anterior horns, as well as a peculiar condition of the gray substance Cavities in the gray matter, as a result of postmortem staining, are not very rare I have set up three slides showing this One of them is from a rabbit the cord of which I took out myself The cord shows all the marks of an artefact, a cavity in the gray matter, some twisted strands of fiber and artificial "rarefaction"

I have set up a section showing the loss of one of the posterior horns, and another similar Weigert stained section, showing the fibers occupying the position that the gray matter ought to occupy. Looking at this, you see that instead of being cut transversely as they should be, if the posterior horns were congenitally deficient, the fibers are all twisted into waving, irregular strands, which stamps the condition at once as an artefact.

DISCUSSION

Dr. Ludvig Hektoen.—Dr. Patrick's remarks call our attention to the importance of fully understanding the artefacts of the nervous system. Although I think some of the statements are rather broad, yet we must acknowledge that these words of caution are timely and valuable. While artefacts of the nervous system are frequently mistaken for morbid changes, yet it may not be entirely amiss to say that care must be taken not to interpret obscure pathologic conditions as artefacts. One frequent method of producing very serious artefacts in the spinal cord occurs from the careless removal, either by reckless use of the chisel and hammer, which should be entirely avoided, or by twisting or bending, and it is particularly this class of artefacts and the resulting so-called heterotopia which Van Gieson has studied thoroughly.

In studying the spinal cord microscopically, it would always be well to so cut the cord as to have serial sections. This is the only way in which we can obtain an exact idea as regards the cells as well as a complete idea of the various cavities which may be encountered.

I have noticed the section upon which there is an absence of one horn. The question would be: What has become of the horn? It does not seem crowded into the other part of the gray matter, but it is completely absent from this section. Serial sections might throw some light on the subject.

Dr. Patrick makes the statement that the carmin stain is the one most generally used in doing microscopic work on the nervous system. I would take exception to that statement. The carmin stain is not used as frequently as some other stains, such as the Weigert stain, and I can see no good reason why it should be used as much as it is even at the present time.

Dr. E. R. Le Count.—I would like Dr. Patrick to give us some directions concerning the removal of the cord so as to prevent the production of artefacts.

Dr. Patrick.—In answer to the last question the method is simply to remove the cord with extreme care, avoid using chisel and hammer and never pull on a nerve root before it is completely cut. Never hang the cord up with a string, never lay it down to harden on a hard surface; lay it on cotton and have cotton between it; never bend or twist it, never put anything on top of it. Be careful in cutting and opening the membranes; in other words, treat it with the greatest possible delicacy. These are simple general directions. One of the most important directions of all is not to trust the removal of the cord to an incompetent assistant, especially to some supernumerary about a hospital, who does not care whether he gets the cord out in one piece or two. As regards Dr. Hektoen's remark, not to take a true pathologic condition for an artefact, the caution goes without saying.

With reference to what I said concerning the carmin stain being the most frequently used, he may be entirely right about that, as I have no statistics on the subject. I think I corrected myself by saying that the Weigert stain was used, perhaps, as much as the carmin for all purposes. I think the carmin stain is most frequently used for nerve tissue, taking all examiners together. The best men do not rely upon it, and I suppose Dr. Hektoen does not. It is one of the oldest stains and if the doctor will think he will remember that in scarcely any report is the carmin stain omitted. Some other stain is left out, but the carmin is always used.

To the question as to where the missing posterior horn in the section went, I should answer from the work of Van Gieson that it went either up or down. It is not in this section. The longitudinal fibers of the cord within the white substance run parallel up and down, and it is not a difficult matter, as Van Gieson showed by experiments, to compress the cord without destroying the white fibers and thus squeeze the putty-like gray matter up and down. The white fibers reassume their original arrangement with the gray matter missing at a certain point. Serial sections, if carefully made, ought to reveal a decided difference. The point I wish to make is, that where there is such a deformity in the gray matter the white matter will show it to a knowing examiner. In illustration I have set up another section with the fibers stained, showing the abnormal arrangement of the fibers in the space where the gray horn ought to be.

(*To be continued.*)

SELECTIONS

Live Questions in Operative Gynecology.—Prof. Frankel of Breslau has recently published a résumé of his gynecologic work during three years from 1893 to 1896. He calls his pamphlet, "Live Questions in Operative Gynecology," (*Tagesfragen in d. Operative Gynecologie*), because he considers in the light of experience and judges by their results various disputed modes of treatment and points of technique. The report is characterized by frankness and modesty, and the effect of it is to support the well-known conservatism of its author. He tabulates some 250 operations covering practically the entire field of gynecology, and also adds chapters on anesthesia, asepsis and after treatment. His explanations are so detailed and so clear that one can derive almost as much profit from reading the book as he could from atttending the author's clinics. The following synopsis may be interesting to the readers of the Journal.

1. *Anesthesia.*—Frankel considers that the question as to the superiority of chloroform or ether is not yet definitely settled. He prefers chloroform, believing that ether merely postpones but does not diminish the danger of anesthesia. The after effects of ether may be as serious as the immediate effects of chloroform. He always precedes the use of either anesthetic by a hypodermic injection of 1 c.c. of this solution: Morph. mur. 0.15, atropin sulph. 0.015, chloral hydrat. 0.25, aquæ dest. 15.0. He states that as a consequence, much less of the anesthetic is required to produce and maintain full narcosis.

2. *Asepsis.*—His aseptic precautions are much the same as those of other surgeons, except that his patients receive a bath after all preliminary preparations and immediately before the operation. Wrapped in sterile sheets, they pass from the bath room to the operating table. For the hands, he uses rather coarse pumice stone soap. For operations on the vagina and perineum as well as on the abdomen (before opening the peritoneum), dry gauze is used; but for the peritoneal cavity, moist gauze napkins wrung out directly from the boiler are employed. He imitates Mickulicz in having a glass bead attached by a thread to each napkin, the bead hanging outside the incision, so as to make sure that none will be forgotten or lost in the cavity. For ligating the pedicle, sewing the abdominal wound and for perineal and cervical operations, he prefers black iron silk of American manufacture. Catgut is used as seldom as possible.

3. *Ovariotomies.*—The diagnosis should be, if possible, clearly established before beginning the operation. Those surgeons are to be condemned who, relying on the security which asepsis gives, consider an exact diagnosis as superfluous and who first open the abdomen fully deciding on the exact measures to be adopted. Examination in narcosis is seldom necessary before celiotomy, since a diagnosis of ovarian tumor can be certainly made by palpation, percussion, and the combined recto-vagino-abdominal exploration. In contradiction to Olshausen's opinion that malignant ovarian tumors cause early amenorrhea, Frankel finds them accompanied by copious menorrhagia and metrorrhagia. He notes that if hemorrhages occur in an elderly woman with an ovarian tumor, though the uterus is little if at all enlarged and though the microscope finds no signs of malignancy in the scrapings of the uterus, the operator should not forget the probability that the tumor is malignant, and he should take precautions not to rupture it nor to inoculate the other tissues. The coexistence of pregnancy should be an additional strong reason for operating. Abdominal section is to be preferred unless the tumor is small and movable, when a vaginal ovariotomy may be made.

4. *Operations on the uterine adnexa.*—When tubal pregnancy is clearly diagnosed before rupture, it ought to be removed as soon as possible. Should rupture have occurred

with free hemorrhage into the abdominal cavity, Frankel does not operate as a rule. He relies upon absolute rest, ice bag, opium and avoidance of stimulants to stop the hemorrhage. He has found this expectant treatment sufficient. The hematocele will gradually be absorbed, should it however, keep on increasing, he would make a celiotomy, or should it become infected he would open it through the vagina. He admits that his opinion in this matter is not modern, but his experience in numerous cases shows the superiority of the expectant treatment.

It is a matter of surprise that Professor Frankel operated only eleven times for pus tubes and pus ovaries. He is no friend of hasty operation in these cases and claims that such tumors, even as large as one's fist, bilateral as well as unilateral, sometimes entirely disappear without treatment. In many cases puncture or incision through the vagina, followed by boric acid injections, produced permanent cure. This simple procedure is not dangerous and may be repeated as often as may be necessary. The major operations in the eleven cases were necessitated by failure of the simple method, by relapse, or by the size or inflammatory condition of the tumors. Operation should be postponed till the acute stage has passed, and in the meantime palliative treatment with ichthyol tampons, etc., should be followed. The advantage of this delay is that the pus loses its virulence, inflammatory products are absorbed and the sac becomes, if not movable, at least distinguishable from the surrounding tissues. The time when pus loses its virulence is not known, but it can be said that at least twelve weeks should elapse after an acute septic or gonorrheal infection before operative measures are adopted. If, however repeated relapses occur or if an exhausting fever continue, exception should be made. In these exceptional cases, the Péan Segond method of total extirpation through the vagina is preferable to celiotomy.

5. *Myotomies*.—Frankel does not agree with the wide spread opinion that every myoma should be at once removed on account of the danger of malignant degeneration. He holds to the old conservative view that ovarian tumors must at once be removed, but uterine myomata only if they show rapid growth or cystic degeneration, if there is suspicion of beginning malignant degeneration, if they produce ascites or pressure symptoms, or if they cause hemorrhage that can not be stopped by palliative means. Especially if the patient is near the climacteric surgeons should wait, and if finally they operate castration should be preferred to myotomy. Quite the reverse of ovarian cysts, malignant degeneration occurs comparatively seldom in myomata. He has had several hundred cases of the latter under observation for considerable periods, and only in one did such degeneration occur. As to choice of methods, if the tumor were large, interstitial, subperitoneal, or intraligamentous, he made a supravaginal amputation. In two cases (both fatal), in order to shorten the operation he followed Traub's methods, *i. e.*, he allowed the rubber ligature (a Nélaton catheter) to remain *in situ*, thus saving the time required for stitching and dressing the stump. In two cases (one fatal) he used Martin's procedure of celiotomy, followed by enucleation of the tumor.

6. *After treatment of celiotomy*.—During the first twenty four hours the patient receives absolutely nothing to eat or drink, no ice pills no soda water no rinsing of the mouth, absolutely nothing. This best stops the nausea and tendency to vomiting. If pain is great, the mixture of morphin, atropin and chloral is given hypodermically. If collapse threatens, he uses subcutaneous injections of ether, camphor or saline solution, or rectal and intravenous injection of the latter solution. To avoid danger of cystitis, the catheter is not used after either operation or confinement. He trains his patients by requiring them for several days before the operation to urinate in a recumbent posture. Further, the privation of all fluids in the first twenty four hours diminishes the need to urinate. As to the few patients who really seem unable to urinate when recumbent, he would prefer to allow them to sit up on the third or fourth day after operation or delivery rather than to catheterize them. On the second day patients receive tea in tablespoonful doses every half hour, and fluid diet is continued until the third or fourth day, when a dose of calomel or castor oil is given to produce the first bowel movement. If it fail a high injection is made. Stitches are removed on the eighth or ninth day, but in ventral fixation the two or three ligatures which transfix the uterus remain fourteen days. A pressure bandage is worn for at least four weeks. Separation of the edges of the wound and consequent ventral hernia occurred in two cases. The consensus of opinion among operators is that no method of stitching will prevent hernia. The best protection is given by careful stitching, rest in bed for a sufficient length of time and a firm pressure bandage. As to drainage, Frankel considers it useless for removing pus or pathogenic germs. If the pus sac has ruptured and if the pus is virulent and has infected the peritoneal cavity, Mickulicz's drain can not help, if the pus is not virulent the drain is needless. He uses the Mickulicz tampon only to stop bleeding where direct ligation is not possible or to fill out a dead space.

7. *Total extirpation of uterus*.—The author would not operate for malignant growths unless there is a possibility of radical cure, if the parametria, vagina, etc., are involved he gives palliative treatment by curette and cautery. He has had cases under observation three years after this treatment without relapse. When the major operation is done, he prefers vaginal hysterectomy, taking also the ovaries, unless the tumor is too large. In two inoperable cases he tried serum injections without, however, any beneficial result.

8. *Ventral and vaginal fixation*.—Twenty ventrifixations were performed for retroflexion, in eight of which on account of prolapse, a supplementary combined operation of anterior and posterior colporrhaphy and perineorraphy was added eight or ten days later. The results were excellent, and the combined operations took less time than amputation of the cervix. In fact, the elongated cervix shortens of itself, the tension of the vaginal walls at their cervical insertion being relieved by the ventrifixation. Frankel has always been an advocate of orthopedic treatment of retro deviation provided the uterus can be lifted up. His experience is that persistent use of suitable pessaries brings about a cure. Comparing the small number of his cases (sixteen) in which he deemed the operation of vaginal fixation necessary, with the large number (up to 235) of other operators during the same three years, he wonders what were the indications and fears that many a uterus was punished for an offence of which it was not guilty. He agrees with Olshausen in the opinion that there are many retroflexions, entirely free from symptoms and which need no treatment whatever. Furthermore, in women beyond the climacteric, the cause of their symptoms is usually not retroflexion but endometritis, and if this is cured, the retroflexion will produce no trouble. However, if prolapse is present either pessary or operation is required. There are so very many nervous hysteric women in whom retroflexion exists, though it does not cause their symptoms. Operation will not relieve them. The cases suitable for vaginal fixation are uteri held back by adhesions which do not yield to massage or forcible divulsion. Suitable cases also are movable uteri which relapse into their old retroflexions in spite of pessaries, etc., the cause here being that cicatrices from cervical tears draw the cervix forward or that the adnexa are dislocated and adherent to the posterior fold of the broad ligament. Martin and others hold that in fixed retroflexion, the cause of the symptoms is not so much the displacement as the adhesions and products of chronic perimetritis. Frankel says that it is not merely sufficient to break the adhesions, but that the uterus ought to be attached and kept in position forward, if for no other reason, to prevent the torn surfaces from again

becoming adherent As technique, he follows Leopold and Czerny in attaching the anterior surface of the fundus (in its intestinal zone) to the parietes, not higher than two finger breadths above the symphysis In all cases he opens the peritoneum and examines the condition of the organ

In vaginal fixation, he has tried both Mallinckrodt's method, in which the peritoneal fold between bladder and uterus is not opened and Duhrssen's, in which it is opened The former does not affect subsequent pregnancies injuriously, while in the latter, the incision into the anterior Douglas cul de sac causes a cicatricial ring which interferes in delivery with the dilatation of the os and the withdrawal of the lower uterine segment over the child's head Furthermore, when the uterus is turned down through the incision, the fixation stitches are inserted in the fundus and produce a forced anteflexion, while in Mallinckrodt's method they are inserted not much higher than the inner os Neither method excludes vaginal and perineal plastic work, which should always be done In all these fixation operations, the stitches are allowed to remain from fourteen to twenty days Twice he successfully performed Wertheim-Schauta's operation for retroflexion, namely, shortening the round ligaments through a vaginal incision

9 *Submucous myomata and polypi* —The introduction of asepsis worked a revolution in the treatment of these cases Formerly, the enucleation had to be completed at one sitting, but now the morcellement may be divided into as many stages as may be necessary, because the use of iodoform gauze between the sittings both stops the hemorrhage and prevents sepsis It is, however, desirable to complete the operation at one sitting if it can be done without endangering the uterine walls Doyen's method of splitting the anterior wall of the uterus through the vagina, removing the myoma and stitching the uterus, meets approval If inspection shows that many myoma kernels are present or that they penetrate close to the peritoneum, vaginal extirpation can be done Even if suppuration of submucous myomata should occur, the prognosis is not so bad as formerly, because the radical measure of extirpation still remains As to electricity, if the slightest doubt exist as to whether the myoma is interstitial, electricity should not be employed, because it not only will not stop the hemorrhage, but it will likely cause ulceration and infection

10 *Perineorrhaphy and colporrhaphy* —Operation is indicated in all lacerations of the perineum, even small ones, if attended by spreading of the vulva, and in all prolapses of the vaginal walls except senile prolapse The alternative is the pessary Frankel is not fond of the pessary, he finds it to be the cause of colpitis and fetid leucorrhea, even where it holds up the prolapse In the case of old women, no treatment has succeeded in preventing relapses, and for them he uses a pessary, preferably an egg shaped ball of glass In plastic surgery, the aim is to cut away as little as possible and simply to unite what has been separated He disapproves of amputation of the cervix, which many combine with every colpo perineorrhaphy The abuse of Emmet's operation must also be classed as gynecologic meddlesomeness He operates only when there is pronounced ectropion, or when cicatrices spring from the laceration along the vaginal wall and cause distinct symptoms, or finally when reflex neuroses are clearly due to the laceration, but he finds that the tears are again torn open in subsequent confinements

In anterior colporrhaphy, Frankel prefers Fehling's method of a bilateral incision, to which he adds removal of the hypertrophic tissue near the urethra because this particular mass is apt to protrude and keep up the sensation of falling out, even after the perineum has been restored He uses catgut so as to avoid the necessity of stretching the vagina and perineum for the removal of the stitches

In posterior colporrhaphy and perineorrhaphy, the chief thing is to properly separate the flaps, i e, to keep in the true layer between the vagina and the rectum If the tear extends into the bowel, he turns the freshened edges into the lumen of the bowel and unites them with fine non penetrating catgut sutures The dry method of operating is used exclusively During the first eight days as little manipulation as possible is allowed Not even the catheter is employed, normal urine does not interfere with healing, but it should be dried off with absorbent cotton Bowel movement is procured on the fourth day In all his cases union by first intention occurred, but in one he had the rare experience of an utero vaginal fistula

11 *Inverted uterus* —In two cases of irreplaceable inverted uterus after confinement, he followed Kaltenbach's method of amputation A rubber ligature was fastened around the cervix and stitched in place with catgut sutures, the corpus uteri was cut off about 2 cm external to the ligature, and the edges of the peritoneum which lay in the opening were united The ligature came off in sixteen days Both patients recovered, there was no forced climacteric and menstruation was normally resumed Hence this method is much preferable to the total extirpation suggested by some authors

12 *Curettage* —This operation, slight but not free from danger, is overdone and abused It is useful for diagnostic purposes though sometimes misleading As a therapeutic measure it is used in septic endometritis, abortion and chronic endometritis In the first it is harmful, opening as it does new doors to infection and breaking down organized thrombi and on account of its unsatisfactory results it has been entirely discarded in Germany In abortion, the curette is not advisable There should be no interference with nature's process unless there is danger to the patient's life, as from severe hemorrhage, decomposition, etc If the abortion is inevitable, the aim should be to extract the ovum in its entirety, and the curette will certainly defeat this aim The insertion of iodoform gauze into the uterus and tamponing of the vagina with cotton will stimulate pains, stop hemorrhage and lead to the expulsion of the ovum If it fail to do so after twenty four hours one should extract with the finger The curette should be used only when small adherent bits of decidua or placenta keep up hemorrhage and the os is but little dilated

Frankel is especially opposed to curetting in catarrhal endometritis whether gonorrheal or not, because it opens new wounds and favors the deeper inroad of the cocci It should be used only when menorrhagia or metrorrhagia is present, and it should be followed by a series of ten or twelve intrauterine applications of tinct iodin or solution of ferripyrin The curette should never be introduced without a speculum (that is, under the guidance of the eye) The external genitals and vagina having been carefully disinfected, a bimanual examination is made to determine the direction of the uterus, which is then hooked down, sounded to determine its internal condition, washed out and finally curetted with a large instrument Speaking of possible perforation, Frankel says that if the operation is aseptic such an accident has usually no bad results If one suspects that he has perforated, he should withdraw the instrument, avoid irrigation, place an iodoform gauze tampon before the os and keep the patient recumbent for a few days, using an ice bag and opium if necessary After curetting, he irrigates again, and if bleeding continues, paints with ferripyrin solution, otherwise he merely lays an iodoform tampon before the os

Old perimetritic adhesions are not a contraindication to aseptic curettage, but acute or subacute inflammations of the adnexa, and especially accumulations of pus or blood near the uterus are contraindications After a brief rest, the patients are allowed to go home with the instruction to remain in bed for two days Intrauterine applications are made at intervals after the fourth day

The author concludes with the warning that long continued gynecologic and intrauterine treatment is injurious, especially to nervous patients DAVID JESSUP DOHERTY, M D

The "Mirror" Reflects —The versatile editor of the St Louis *Medical Mirror* says in the November number "Speaking of criticism brings to my mind some of our editorial fraternity who are constitutional kickers and ever on the lookout for the weak spots in the armor of their competitors, or I would rather say colleagues They never see anything but blemishes or distorted pictures, they seem to be unable to praise any thing, I doubt if they would be able to get their consent to praise God, from whom all blessings flow But don't blame them, they are built that way, they have my sincere sympathy, and that leads me to say that I agree with Ras Wilson, the Philistine, when he says 'Young man, write as you feel, but try and feel right Feel good humored toward every one and every thing Believe that other folks are just as good and just as smart as you, for they are Give 'em your best and bear in mind that God has sent 'em in his wisdom all the trouble they need and it's for you to scatter gladness and decent, helpful things as you go Don't be too particular about how the stuff will look in type, but let 'er go—some one will understand This is better than to write so dosh bing high and so tarnashun deep that no one understands—let 'er go'" Permit me to say further that while I invite criticism and even enjoy it and try to profit by it, and love commendation, I propose to go on sawing wood, sawing it on my own wood pile, and running the *Medical Mirror* energetically and aggressively without waiting for the consent of other nations "

PRACTICAL NOTES

Thyroid Therapeutics in Stunted Growth —Schmidt of Frankfurt, describes in detail in the *Therap Woch* of November 15, his success in securing renewed growth in many cases of retarded development, with one thyroid tablet a day, continued for a year and a half to two years, omitting the tablets every fourth week His practice was a tablet of 0 05 under 4 years, 0 1 from 4 to 7, 0 15 from 7 to 14, and 0 3 over 14 This prolonged medication produced no inconveniences, and the patients gained in weight as well as height, after the first week or so Some grew 12 cm in a year and a half, others from 6 to 11 cm

Treatment of Prolapsus Uteri at the French Surgical Congress —Bouilly's fine and practical address emphasized the advantages of massage and special gymnastics in the early stages, and advocated operating on the vagina and perineum, also the amputation of the cervix He always completes hysterectomy by plastic operations, but reserves this for the severest cases and for elderly women All the gynecologists seem to be growing to regard hysterectomy in young women with less and less favor Is it the decadent birth rate which has raised up so many champions of the uterus in these latter days? asks the *Province Médicale*

New Method of Rhinoplasty —Israel is justly satisfied with an operation he performed recently on a young woman to restore the nose He applied a flap from the ulnar side of the forearm, with a small piece of the ulna itself to make a bony frame for the new nose The piece of bone was not cut entirely out of the ulna until it had been fitted into place in the nose, when it was sawed off slanting the exact shape required, and the cutaneous flap was then fitted over it Six sittings were necessary to complete the operation, and the arm was immobilized in a cast, as usual when only the cutaneous flap is applied —*Deutsche med Woch*, November 12

Treatment of Talipes at the French Congress of Surgery —Forgue's address was an appeal for early and protracted treatment and, according to the gravity of the case, manual reposition with anesthesia He believes, but without enthusiasm, in the success of Vincent's tarsoclasis, and in purely orthopedic means, and is a warm advocate of the Phelps' modified by Kirmisson (opening of the medio tarsal articulation) Operations on the bones should be reserved, he says, for the very gravest cases. In the discussion, Reboul, Calot and Martin proved strongly conservative, Boekel and Jalaguier are radical, while Doyen and Champonniere are absolute anarchists, stating that the more of the bony structure is removed, the better the foot performs its functions —*Prov Med*, November 14

Operative Treatment of Tuberculous Pneumothorax —Some advocate puncturing as often as there is danger of suffocation, but Unverricht does not approve of this at all, and considers the only rational operation the making of a permanent fistula, keeping it protected by a wire basket over it, with a bandage just below to catch the secretions, without closing the mouth of the fistula This applies to all cases in which there is a probability that the lung will in time expand normally, but if there is no hope of this, then the operation will do more harm than good Even in advanced tuberculosis, the pneumothorax often heals completely The incision is made in a space between the ribs, and he believes that many more patients will be saved when surgical intervention in pneumothorax is more generally adopted —*Cbl f Chir*, November 14

Pneumotomy in the Treatment of Hydatic Cysts of the Lung —Tuffier has collected the statistics of 58 pneumotomies on record for the relief of hydatic cysts of the lung, and 71 pleurotomies with 2 deaths, and 4 interventions in non suppurated central cysts He advises the oblique thoraco abdominal incision on the rear edge of the axillary line, on account of the extreme difficulty of differentiating a cyst in the lung from one in the liver, as the neoplasm pushes the lung so far out of its normal position He concludes that pneumotomy is the operation to be preferred, as it has given over 90 per cent of recoveries, while medical expectation has entailed a mortality of 64 per cent. He prefers chloroform in these cases to ether, and advises long tamponing to avoid danger of hemorrhage —*Presse Méd* October 24

When to Operate in Appendicitis —Gersuny does not believe in indiscriminate operating, but restricts it to three forms of appendicitis 1, the patients that demand intervention themselves on account of persisting abdominal distress, 2, when the suppuration is of a progressive character, and threatens perforation, and 3, when the perforation has occurred and there is general peritonitis, which cases require operating at once He has cured two patients four hours and twenty hours respectively after perforation An operation is strictly contraindicated in cases of extreme heart weakness In ordinary typical cases, rest, opium and deprivation of food, are enough treatment In atypical cases all preparations must be made to proceed to an operation if it becomes necessary Where there is hope of spontaneous recovery, it is allowable to interfere, but where the danger is imminent it becomes our duty to interfere —*Therap Woch*, November 15

Treatment of the Ulcera Corneae —These ulcers are apt to heal with extensive leucoma, and the usual methods of treatment that prevent this require skilled assistance which it is not always possible to procure Akerblom describes his method in the *Therap Woch* for November 8, which is never followed by leucoma, and is so simple that no assistance is required It is a modification of Mellinger's linear cauterization of all affections accompanied by swelling of the conjunctiva As it is difficult to keep a sharp point on the caustic, he heats a silver sound in a flame and melts a drop of the caustic on the tip After two or three drops of a 5 per cent cocain solution have been instilled, he takes the patient's head in his left arm, and opens the affected eye with the fore and middle fingers of the left hand, while the patient, seated on a low chair, turns the ball in the direction away from the ulcer The caustic is then passed all around the edge of the cornea, over the conjunctiva bulbi about 1 mm from the peripheral edge of the cornea He then lays the sound aside, neutralizes with salt solution, and applies a sublimate compress, 1 to 5000, which the patient renews as necessary After the scab falls, the operation is repeated, but is never required more than three to four times His success has been invariable with this method, even in severe cases of hypopyon and threatening perforation

New Method of Circular Suture of the Intestines —E Ullmann recently presented at a meeting of the k k Ges der Aerzte in Vienna, a patient cured of a tuberculous neoplasm in the cecum by resection of part of the ileum and cecum One end of the intestine was then turned inside and the other end inserted in it, like an intussusception, thus bringing the surfaces of the serous membrane on each end into contact inside the intestine for quite a little distance A piece of carrot shaped like a cylinder, with a hole through it and a deep groove around the center outside, had been placed inside the intussusception A strong catgut ligature was then made around it, fitting into the groove and pressing the two serous surfaces together Gas passed through the first day and feces in a week, followed by rapid recovery This simple operation requires but a couple of minutes and after the abdominal wound is closed the union is very firm, as the intestines grow together at once, and the carrot forms a strong enough support, which even force will not dislodge, as Ullmann states He has found by various tests that the catgut remains unaltered long enough to accomplish its purpose —*Wien klin Rundschau*, November 15

Surgical Treatment of Cancer of the Stomach —Kocher of Berlin states that gastrectomy for cancer is now an absolutely certain surgical operation, and that physicians generally should be informed of this fact, so that they can have their patients operated upon at the earliest possible moment, with the guarantee of almost certain cure Péan reports numerous operations for cancer, but only twelve gastrectomies, with four deaths In four cases of chronic ulcer of the stomach, accompanied by such pain that it was impossible to refuse the patients the possibility of relief by an operation, all four were completely cured He was also successful with several cases of non cancerous stenosis of the pylorus He advocates closing the stomach completely, and then making an anastomosis with some loop of the intestine near by (gastro duodenostomy), in cases where it is necessary to remove a very large amount of substance on account of the extent of the cancerous growth Intervention is always possible when the upper part of the duodenum alone is affected and a small, even very small, portion of the stomach near the cardia can be retained He has performed fourteen gastro enterostomies and uses the Murphy button Doyen reports a total of ninety four operations on the stomach, including fifty five for non cancerous lesions, ulcers, dilatation or severe dyspepsia with advanced cachexia, cases abandoned by the physicians He attributes his surprising success in these latter cases to the fact that the dyspepsia is caused by some constriction of the pylorus, and disappears when normal communication is reestablished between the stomach and the intestines He has never used an anastomotic button, which he considers a step backward in surgery He requires only twenty five minutes at the outside to complete the operation Roux has twelve successes to report with one failure He makes a Y shaped incision (gastro enterostomy), to avoid "elbows" which are liable to occur with a lateral operation He prefers a button to a poor suture, but considers a well made suture far preferable to any button, as the patient can begin to take nourishment at once a most important factor in rapid recovery —*Bulletin* [illegible], October 25

New Process of Vaginal Hysterectomy —The broad ligaments when seized with the forceps offer an uneven surface, which sometimes allows parts of the ligaments to escape and necessitates annoying delay in the operation To obviate this, Faure has devised a new process of vaginal [illegible] which also permits a much firmer ligature than other methods, if desired It is described in full and illustrated in the *Presse Médicale* It is only applicable to those cases in which the uterus can be drawn down to the vulva after median section (Müller, Quenu), or after Doyen's anterior hemisection, which Faure much prefers After the uterus is thus drawn down and out of the vulva, with its anterior wall split open to the top, the rear wall is then cut down vertically one third to one half from the top, thus separating partially the organ into halves, which spread apart One side of the upper part is then seized with another pair of forceps and cut transversely, parallel to the upper edge of the broad ligament and at right angles to the axis of the uterus, continuing the cut 2 to 4 centimeters up into the broad ligament, above its attachment to the uterus This transverse section should extend beyond the insertion of the ovary and the operator has thus in his forceps the upper third of one half of the uterus with a third of the broad ligament as a pedicle This pedicle being small, thin and movable in any direction, can be easily and firmly grasped with a pair of forceps But it is just as easy and simple to make a permanent, firm ligature as to seize the pedicle with the forceps, and a piece of silk applied at once without the forceps (which may spread the tissues to be ligated) positively insures hemostasis After the forceps or this ligature have been applied above the insertion of the ovary, the removal of this upper third of one half of the uterus with its ovary and the attachment of the broad ligament, becomes a very simple process, with no possibility of hemorrhage The upper third of the opposite half is then separated by a similar transverse section extending up into the broad ligament in the same way, leaving a similar small pedicle which is also seized with the forceps or ligated in the same effective manner and removed The upper third of the uterus on both sides is now gone and a similar procedure with the second third follows on each side, cutting with the scissors up into the broad ligament far enough to afford a convenient hold for the forceps or ligature, the posterior wall of the uterus being cut down on the median line as necessary The lower third (the cervix) left on each side, is also treated in the same way and the entire uterus is thus removed in six pieces, leaving six projecting stumps of the broad ligament, each securely ligated or held with forceps There is very little hemorrhage when the transverse incisions are made, as they are either just above or below the principal uterine and utero ovarian branches

The New Treatment for Sprained Ankles —In the *International Journal of Surgery*, Dr Lawrence Crook of Jackson, Tenn , gives an account of six cases of sprained ankle treated by what has been called "the Gibney method " It is now about three years since Dr V P Gibney of the New York Hospital for Ruptured and Crippled advanced, in the *New York Medical Journal*, certain propositions as to this lesion that were in his estimation new, yet reasonable, practicable and worthy of general adoption "The experience of numerous observers since then has verified his statements, and as one of those who have used his method I am before you today to advocate it and prove its efficacy The treatment, according to Gibney, 'involves no loss of time, requires no crutches and is not attended with any impairment of functions ' The method is as follows A number of strips of rubber adhesive plaster about nine to twelve inches in length and of appropriate width, are prepared I then proceed thus not following exactly the method of Gibney Beginning at the outer border of the foot, near the little toe, the first strip partially encircles the joint and ends behind the foot The second strip is begun on the inner side of the foot and is applied on the opposite side nearly meeting the first strip behind Other strips are applied in like manner, each one overlapping the last and crossing its fellow of the opposite [illegible] in [illegible] t, so that the an[illegible] g[illegible] nd smoothly encased [illegible] not to [illegible] the joint with any one strip. After having bound the foot firmly it is well to add one broad strip running around the foot from the internal side of the leg down the internal side of the foot across the plantar surface and up the outside of the leg, 'as much as possible to take the place of the middle fasciculus of the external lateral ligament, which is so often the one most injured.' It is a good plan to place a pad of absorbent cotton over the external malleolus and in the fossa below, to prevent undue pressure and chafing. Any one of the injured ligaments may receive a similar reinforcement from an extra strip. I then apply a roller smoothly over the entire surface, allowing it to remain until the plaster takes firm hold. The simplicity of the strapping treatment, the ease with which it is applied and the immediate and marvelous effect upon the patient can not fail to impress even the most skeptical. Though in direct opposition to the teaching of most of the authorities, it is none the less deserving of attention and application. To judge it by its effects and results, the only just basis from which to deduce a conclusion, we are forced to decide that it is a wonderful improvement over the old methods. The saving of time alone is of great importance in the case of men employed by corporations that pay their employes for time lost when injured, to accident insurance companies, to whom the saving of time means a saving of many hundreds of dollars in indemnities, and last and best of all, to the patient himself, who can soon resume his work, free from pain and without fear of unfortunate results in the future.

"*Case 1.*—A male, age 22, was brought in one evening on a litter, apparently suffering great pain and unable to walk. Dr. White, the superintendent, called me in and we diagnosed sprained ankle. Deciding to use the Gibney treatment, the foot was cleansed and the adhesive strips applied as explained previously, reinforced with a roller bandage. The patient was then told to take up his litter and walk, which, after some hesitation, he did, walking out of the hospital with only a slight limp.

"*Case 2.*—Some weeks ago I was called to attend an employe of the I. C. R. R. who had fallen from the top of a box car, severely spraining both ankles. The injured parts had been dressed for thirty six hours in lead and laudanum lotion, but were, nevertheless, greatly swollen, discolored and painful. He had them elevated on a pillow when I arrived. I told him I would have him walk about the room in a few minutes, a statement which greatly amused his friends and himself. Shaving the parts and proceeding as usual, I ordered him to arise and walk, allowing him to use his cane. Slowly, cautiously, timidly and fearfully, at first, he placed his feet to the floor, exclaiming 'Boys, that don't hurt. I *can* walk,' and he walked about the room several times. Three days later he was on the street telling his friends of the wonderful treatment.

"In conclusion, in the *Railway Surgeon* for Jan. 28, 1896, there is an article by Dr. A. B. Poore of Cedar Rapids, Iowa, which is highly commendatory of the Gibney treatment. He reports complete success in every case, and among other things says, after describing the treatment at length 'Usually the patient at once makes two comments, that the pain is very much lessened as soon as the strapping is complete, and after he has tried it that he is surprised to know how well he can walk. The average time is so much shortened by this treatment, and the pain is so much less, that the ordinary sprained ankle is no longer a bugbear.' My experience coincides with that of Dr. Poore in every particular."

Paralysis of the Soft Palate.—Dr. Charles Beevor, in *Clinical Journal*, October 7, reports a case of this affection in a male patient, aged 54 years, occupation that of a rag dealer. "Eighteen months ago he had an attack of right hemiplegia, which came on quite suddenly, but he did not lose his senses. He was in bed four weeks with loss of power in the right arm, right leg and right side of the face, and his speech became affected and has remained so. I shall not now go into the cause of this, as I do not propose to deal with hemiplegia, but it is probable that his case is one of thrombosis, not hemorrhage. The second cardiac sound was accentuated, but no albumin in the urine. On examination the patient was found to have right hemiplegia and paralysis of the right side of his face was extreme. He can now whistle, close the eyes and show the teeth. A year ago he had some difficulty in putting the tongue into the right cheek, but he can do so fairly well now. I may here mention that in examining the tongue it is not sufficient to see whether it comes out straight, it should be ascertained whether the patient can move the tongue in all directions. The etiology of this form of paralysis is various. Taking the cortex first, the point where you get, by electric stimulation, movement of the soft palate on the opposite side only is at the foot of the ascending frontal convolution. Mr. Horsley and myself, working on the subject in the monkey, found that there were certain points at the foot of the ascending frontal convolution, stimulation of which gave elevation of the opposite half of the soft palate, *i. e.*, stimulation of the left cortex caused drawing up of the palate on the right side only. In each experiment a drawing of the cortex was made on paper ruled with lines which divided it up into squares of 2 mm. the side, and each of these squares was separately stimulated. The squares where the movements were obtained are marked in the diagram. The area for the soft palate is at the lower end of the ascending part of the frontal convolution and close to the points which, when stimulated, produced movements of the face and tongue. I believe it had not been shown before that the movement is unilateral. The question arises whether a lesion will produce this paralysis of one half of the soft palate. It is probable that the soft palate fibers would go along with those of the tongue, the representation of which is close to that of the palate. The next question which arises is, where is this nucleus which sends fibers to the soft palate? It used to be thought that the soft palate was supplied by the facial nerves and it was utilized as a means of ascertaining whether the lesion was inside or outside the skull. Dr. Hughlings Jackson said years ago, that he had never seen a case of paralysis of the soft palate in paralysis of the facial nerve and Mr. Horsley and myself did some experiments to test this. We removed one hemisphere and stimulated the peripheral ends of the cranial nerves and found we got no movement of the soft except from the accessory nerve to the vagus, no movement from the facial or pneumogastric or any other nerves. The next problem is the location of the lesion. First, taking the causes of paralysis of the soft palate from below upward, the simplest case is one of paralysis of the nerves, as after diphtheria. In this case there is the history of a sore throat or definite diphtheria, then gradual onset of paralysis, always bilateral. Reflex action and faradization are both lost and in many cases sensation is also lost. You will see why reflex action must be lost as well as faradization, namely, because the lesion is below the nucleus and the muscles are thus cut off from their trophic centers. If the motor or the sensory nerves be affected there is no reflex action, because the reflex arc is broken, and when the motor nerve is affected electric reaction of degeneration ensues. In a lesion of the nucleus of the accessory nerve to the vagus the onset is, as a rule, gradual, as in the man I showed you with amyotrophic lateral sclerosis. In a case like that the onset is gradual and is nearly always bilateral, that is, the nucleus on both sides is affected. There is another form met with in which the nucleus itself is affected and which begins with a sudden onset due to thrombosis and called acute bulbar paralysis, here the reflex action is lost and there is loss to faradism. To sum up, the prognosis in diphtheritic paralysis is favorable in progressive muscular atrophy, or in amyotrophic lateral sclerosis it is very unfavorable, as the disease will steadily progress and probably cause death in a year or two, while in acute bulbar paralysis and in acute lesions of the nucleus, or of the motor tract above this, or in the internal capsule or cortex the prognosis is better, as the patient may improve, and even if he does not the disease will not advance, except he have another attack to which he may succumb. Hence, excepting diphtheritic cases, all paralyses of the soft palate are very serious."

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SATURDAY, DECEMBER 19, 1896

THE DAILY MEDICAL INSPECTION OF SCHOOLS

It is reported that the New York City Board of Health is about to follow the lead of Boston, in the matter of school inspection for the repression of infectious disease It is proposed to employ a staff of physicians, 150 in number, for a period of ten months in the year The corps of physicians is to be superintended by a chief inspector, whose salary will be $2,500, the members of this staff will receive $30 per month, making the total cost of the bureau $47,500 Dr GEORGE B FOWLER, the Medical Commissioner of the Department, has stated that a preliminary investigation, covering a period of over two months, has left the profound impression that while there may not be at the present time any special prevalence of contagious diseases among children of the school age in that city, a material improvement in the death rate can be effected by a daily inspection of the pupils at the various public and parochial schools, having in view the earlier detection of cases of diphtheria and other preventable diseases One branch of the duty of the inspectors will be the following up of the cases of absentee scholars whose absence is believed to be due to sickness, and in this way affording the Department timely information whether the cases of sickness are of an infectious nature or otherwise It has been found, with regard to measles for example, that in hundreds of instances this disease has existed in families, the parents of which have been entirely ignorant as to the cause of their children's sickness, so that the customary school-detention has been practically impossible at the time when such detention would be especially important for the reduction of exposures, and that in many such cases the children have been without medical attendance during the period of absence from school In other instances the family physicians, having been misled by the mildness of the initial symptoms in the sick children, have failed to make report of the cases as being contagious in character In the JOURNAL, for October 24, we gave a sketch of the medical inspection scheme that had been on trial for a year at Boston, from which it will appear that the medical men are held responsible for the kind of quarantine that is maintained by the families, after the inspector has designated the room that shall be set apart for the contagious patient If in the opinion of the Inspector, the quarantine can not or will not be kept, it becomes his duty to provide for the removal of the patient to the hospital for infectious diseases

INTESTINAL PERFORATION COMPLICATING TYPHOID FEVER

Surgical intervention in cases of peritonitis of whatever nature has been attended with such good results that what was considered at first as a bold operation has come to be looked upon as an accepted procedure Success has attended timely and expeditious operation for peritonitis following perforation of a gastric or intestinal ulcer, as well as similar treatment of tuberculous peritonitis and that form due to pneumococci, and also appendicular peritonitis In the past it has been customary to describe two varieties of peritonitis complicating typhoid fever, one the result of perforation and the other occurring through propagation The first is a serious complication, usually widespread in distribution and resulting from perforation of an ulcerated Peyer's patch or solitary follicle, the second is said to be less serious, more limited in extent and resulting through propagation of the infectious process from the intestinal wall to the peritoneum

Peritonitis due to perforation of an intestinal ulcer of typhoid origin does not always set in abruptly with violent symptoms, but on the contrary the onset may be insidious and the symptoms of but moderate intensity The condition of the patient is not conducive to vigorous reaction, while the perforation is usually small and the escape of intestinal contents small In a communication upon this subject presented at a recent meeting of the Académie de Médecine, DIEULAFOY (*Presse Médicale*, Oct 28, 1896, p 569) pointed out that hiccough is a very characteristic sign of intestinal perforation during the course of typhoid fever, but even more so he considers a sudden decline in the temperature below the normal[1] The latter differs from that which rarely marks the defervescence of typhoid fever in that this is attended with amelioration in the general symptoms, while the temperature does not fall below the normal The hypothermia of perforation differs from that of hemorrhage in the gradual rise in the temperature that takes place in the former and the more rapid rise in the latter

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[1] In criticising the latter portion of this statement Lereboullet (Gaz Hebdom de Méd et de Chir Nov 8, 1896 p 1069) issues the caution that the algidity of collapse should not be mistaken for hypothermia and that a reliable temperature registration can not be secured in the axilla

In the large majority of cases peritonitis due to typhoid perforation is fatal There are, however, undoubted cases in which the process has remained circumscribed, while adhesions formed and recovery followed DIEULAFOY is unwilling to admit the occurrence ordinarily of peritonitis by propagation, without perforation In cases of this kind he believes that the appendix is really the seat of the disease, with secondary involvement of the peritoneum He contends that typhoid bacilli, as well as other pathogenic microorganisms, migrate through the walls of the intestine only when their virulence is intensified by confinement in a closed cavity, as the appendix is wont to become when inflamed

There may, then, be two forms of typhoid appendicitis complicating typhoid fever, either of which may lead to peritonitis In one of these the lymphatic elements of the appendix become the seat of typhoid lesions, with ulcerative perforation and consequent peritonitis The symptoms of this condition do not differ from those that attend perforation in other parts of the bowel as a result of typhoid ulceration In the other form of appendicitis complicating typhoid fever the condition is a true appendicitis of the usual variety, with the classic symptoms of this disorder and the possibility of all of its complications To distinguish the two the former may be designated typhoid appendicitis, the latter paratyphoid appendicitis Paratyphoid appendicitis is to be distinguished from peritonitis due to typhoid perforation especially by elevation of temperature, while as has been stated, the temperature falls below the normal when intestinal perforation takes place as a complication of typhoid fever

The medical treatment of peritonitis secondary to typhoid perforation consists in keeping the bowel at perfect rest, with total abstinence from food and drink, the administration of extract of opium, one-third grain every hour, injections of morphin beneath the skin and the application gently and cautiously of ice to the abdomen These measures will, however, usually fail and surgical intervention will become necessary In cases of paratyphoid appendicitis the indications for operation and the successive steps to be pursued are pretty much the same as in cases of ordinary appendicitis and appendicular peritonitis In cases of perforation and peritonitis the success of operation will depend upon the promptness with which the condition is recognized and the expedition with which the necessary manipulations are carried out When the site of perforation can be found this should be appropriately closed and drainage provided for Often more than one perforation exists or a second one may be subsequently added to that already existing, so that under most circumstances it will be conservative surgery to pack the wound in the abdomen and leave it partially open All in all, it would seem as if the danger of operation were smaller than the risk of uncertainty from non interference when the condition is recognized or even seems probable

BOOK ENTERPRISE

"Of making many books there is no end," but the selling of books requires more talent every year Teachers of medicine, specialists, general practitioners and medical men of every grade of culture, from the bold quack to the most learned physician, catch the infection to write a book as the highest attainment possible Then comes the struggle to sell it The wary publisher is always ready to print and issue the volumes if the author will pay the bills This is very common in most works, and the publisher is simply the broker for the sale receiving a large commission, or what he can get Frequently the largest circulation is the review copies for the medical press, a few presentation works to friends and libraries, and the work is dead The author has paid for this short lived fame, and dies with the delusion that the publisher or some cruel journal is responsible for this failure Publishers who have ventured to print works on the promise of large profits, and find the returns very slow must devise every possible means to create a demand for the book As the books increase, both those issued on commission and those which they have invested in, the effort to sell becomes more and more difficult Recently some of the large eastern publishers have started a new plan for disposing of books Finding cities where active medical societies meet often, they arrange with the secretary to send him packages of books for review These works are distributed among the members, following their individual taste as far as possible Thus giving works on surgery to persons who have a taste in that line, and so on with diseases of women, children and other affections The member is requested to read the work and give the society a review of it at some distant meeting Anyone wishing the work can have this copy or others at a good discount The amateur reviewer is flattered by the honor of testing the value of a new book, and showing his critical ability to his associates Hence, he reads with great care and often becomes interested in and purchases the book, this from mixed motives to keep it from his rival, and to show his desire to be up with the times Not unfre-

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or mouth but must be sought in the rectum He attaches far more importance to the frequency and character of the pulse maintaining that intestinal hemorrhage or perforation is attended with increased frequency and irregularity of cardiac action quently an adverse criticism will rouse up a rival to examine and purchase the book At every meeting this department of new books furnishes a most interesting topic of discussion which always ends in the sale of the book

The wise publisher pays the express charges both ways, leaves the works in the secretary's care four or five weeks, only stipulating that cash less the discount be sent for all works retained In this way last winter over fifty volumes were sold in one small town In many respects this is an admirable way of selling works, and rousing the critical faculty of reading and comparison of books Many of these reviewers would never read these books except for some special motive, or to appear learned before their associates Whether they purchase the work or not, they derive satisfaction in having measured their intellectual abilities with the author Others are impressed with the teaching of the author and like a free sample of a new drug, enjoy and fully endorse it always after It will be a curious study in the future to know how far physicians will buy books which they read before purchasing The books must have some attractions, which grow from an intimate acquaintance, or this method will be fatal Few works bear long study by the owner, unless it be encyclopedic books of the day, and even these are usually read in part only There is certainly more science and profit to the profession in this method of selling medical books than by those of the glib unscrupulous agents who force the sale often against the judgment of the purchaser The reviews of general practitioners are often clearer and more accurate of many books, than the learned professional critic So far as our JOURNAL is concerned, its limitations of space have prevented us from doing more than giving notices of books, with occasionally brief commentary But in these notices we have always tried to give our readers an unbiased and truthful summary of the contents, and a correct idea of the scope and probable value of the work noticed If in some way authors could reach the rank and file of the profession, and secure their endorsement, books of merit would not require business-pushing and effort to find purchasers

MIRROR SPEECH

In the "Bulletin" of the *Progres Médical* of November 28, M BAUDOUIN editorially calls attention to a curious fact of observation bearing on the disorders of speech, that, as he says, was liable to be lost in the literature of surgical procedures A little girl of 12 years was trephined, apparently *in extremis*, for a supposed cerebral abscess Great improvement followed the operation, but there continued for five weeks a peculiar disorder of speech, in which the child made use of incomprehensible utterances, with an evidently intelligent purpose For example, the following is given "*Te-tan-ma, Yen-do sieur-mon, chant-me le-quil-tran-ser -lais-me-vous-las-vous*" This was uttered with evidences of great anger, and similar sounds were repeated with increasing rapidity Close attention to these utterances revealed that the child was really using the French language in a way clearly resembling the back-slang of the criminal, she was syllablizing backward all her words The above thus interpreted, became "*Ma tante Monsieur Doyen, méchant voulez-vous me laisser tranquille*" This was first discovered by making her write down what she wanted to say, and it was seen that she simply wrote the syllables backward without making the slightest error Subsequently her normal power of speech returned to her with otherwise marked improvement

There is an important suggestion in this observation that possibly the unintelligible utterances of individuals suffering from brain disease with aphasia, and which are not at all infrequently observed, may be cases of this kind The patient evidently tries to say something which is not understood and is annoyed and excited because of this fact It is, moreover, one of the first cases, if, indeed, it is not actually the first, as M BAUDOUIN supposes, where anything analogous to the well-known "mirror writing" that has been so fully studied by many authors, has been noticed as occurring in the speech of aphasic patients M BAUDOUIN proposes for it the name, "mirror speech," as indicating this relation and describing as nearly as can be done by a simple designation, the special feature of the phenomenon

AN IMPORTED CUSTOM

A custom which, although said to be common enough in Europe for many years, has only lately reached America, is that of hotel "privilege" as applied to doctors It has always been the case in the larger hotels that the boot-black, the proprietor of the news stand, and the cigar man, paid the hotel for the privilege of conducting their business The custom has now been extended to the hotel doctor

The doctor attached to one of the newest and largest Chicago hotels lately left it, and it is said owed the hotel some $1,500 The proprietor was apparently not backward in taking steps to recover his loss, and as there were several applicants for the vacancy, he placed the privilege at $500 a year, for not less than five years the $2,500 to be paid in advance As the place was not put up at auction, the first comer, a pleasant young gentleman, procured the funds and became installed in the hostelry, and now watches with complacency the mild envy of his less fortunate rival It is to be hoped that the leveling tendency of the times will not progress so far that the social standing of the hotel doctor may be placed on the same footing with that of his privileged associates, the boot-black and the cigar vendor

CORRESPONDENCE

Foreign Bodies in the Auditory Canal

Albion, Mich , Dec 14, 1896

To the Editor —Mary B , aged 5 years, of German parentage, was brought to my office by her father recently He gave a history that the child had complained for several months of ear trouble, and especially of the left ear, and at times suffered with ear ache An examination with speculum and reflected artificial light, revealed what was first supposed to be hardened cerumen Copious syringing and douching failed to dislodge it and a closer examination and contact of the substance with the ear spoon disclosed a hard, smooth surface, and the conclusion was reached that a foreign body had become impacted The surfaces were so smooth the forceps could not maintain their purchase, the parts so tender that a tenaculum was with difficulty passed behind and the body removed It turned out to be a round, dark, smooth marble of the full diameter of the canal Next to the tympanum was a small wad of newspaper The right ear was next examined This was found to be filled also, the forceps removed two paper wads, a small piece of chewing gum and a small sized pebble The canals were considerably ulcerated and the tympana inflamed, but no evidence of perforation It was a new experience to find the auditory canal a toy and plaything repository

Henry Denny Thomason, M D

Hydrophobia

Chicago, Nov 24, 1896

To the Editor —What can be done by the profession, the public, or the authorities to prevent hydrophobia?

Two cases of dog bite, one followed by rabies with fatal termination, that have come to my notice recently, have urged me to bring this subject before the medical profession If these lines open up discussion and stimulate the readers to some activity in the matter, they will have fulfilled their mission

For the history of the case of rabies I am indebted to Dr J Johnston Bell On October 6 of this year the child of F R , 19 months old, was severely bitten by a strange dog, while playing around its mother in a lot adjoining their home on N Oakley avenue Dr Bell attended to the surgical treatment of the child As the identity of the canine was not established and no mad dog was located by the police after diligent search, the Pasteur treatment was not suggested The little one made a good recovery, although one cheek was torn through so as to expose the teeth On Monday, November 16, six weeks after the bite, the child developed symptoms of hydrophobia and died early Wednesday morning, November 18 Dr Bell was kind enough to call in Dr Bruning and myself to see the case on Tuesday After getting the history of this case, it occurred to me that I had attended a case of dog bite in the neighborhood at about the same time that this child was bitten Reference to my books and personal inquiry developed the fact that on October 6 I had attended a child, aged 7 years, at N Robey street and Clybourne avenue, within a few blocks from Dr Bell's case The description of the dog given by the parents of both children tallied This and the coincidence of time urged us to insist upon the Pasteur treatment for my patient, to ward off if possible the dread disease The parents, although very poor, consented to put their child under treatment with Dr Lagorio at the Chicago Pasteur Institute

Cases of this kind are not rare instances in large cities The question then is, what can we do to prevent fatalities? I see no way, except to anticipate the worst and subject every case of dog bite to the Pasteur treatment, unless we have the dog and know him to be free from rabies So far, so good, but the treatment is not in reach of every one, because of the limited number of institutes and the expense of treatment Dr Lagorio has been conducting the Chicago Institute at his own expense for the past six years and has treated 532 patients up to October 1 Many of these patients were unable to pay, quite a number dishonest, so that his services were but poorly paid He has, on several occasions, applied to the municipal and State authorities to assist him in his grand work, but without success In view of the fact that hydrophobia is fatal in practically all cases, after symptoms develop, and since the Pasteur treatment is an absolute and safe preventive in all cases treated at once, it is the duty of the community to place this boon within the reach of all If the State and municipal authorities can not be roused to do their duty, I would suggest the formation of a Pasteur society, a national society, with the aim of organizing and maintaining institutes in every State for the treatment of every case of dog bite sent by physicians Enough fees could be collected to make the institutes self sustaining or nearly so While looking to the prevention of rabies, the dog, cat and other dangerous animals should not be lost sight of

Louis F May, M D

191 E Fullerton Ave

An Explanation

St Paul, Minn , Dec 14, 1896

To the Editor —Your columns are hardly the place for a literary controversy, but I can not refrain from sending a line in answer to the courteous (?) letter of Dr B H Putnam in your last issue If he will read my first letter he will see that I made no attempt to translate the Latin of Cordus' Epigram, but simply called the attention of "R M W ," who sought for information, to the fact that the lines he quoted were originally translated (by whom I do not know) from the Latin, as stated by me My authority for this statement may be found in Baas's History of Medicine, page 369 The translation, although more liberal is also I think more poetical than that given by Dr Putnam

Yours truly, Burnside Foster, M D

PUBLIC HEALTH

Plea of Ignorance as to Infectious Diseases—Dr Woodforde, Medical Officer of Health for Berkshire, England, in *Public Health*, October, makes the following observations on this difficult subject "During the period that the Act (of notification) has been in operation in the greater part of the district it has worked satisfactorily and with uniform smoothness so far as notification by the medical attendant is concerned, and the fears that were entertained by some of its operation involving such publicity as would often be likely to be injurious to the parties concerned has not been justified by the result, while the decrease in the mortality of some of the notifiable diseases has been very marked The Act does not, however, as yet confer all the benefit on the community that it might do, first, because its adoption in any given district is optional, and secondly, because it is so drawn that the 'dual' notification for which it provides is practically a dead letter in the district, and I can not entertain a doubt but that a large proportion of mild attacks, where a doctor has been called in, are never notified at all, nor are the proper precautions taken to stop the spread of infection This arises from the fact that, while the Act requires the head of the family or other responsible person to notify *as soon as he becomes aware* of the nature of the illness, it does not require him to take any steps to obtain such information, and the plea of ignorance is consequently set up with much success, when the case has not had medical attendance, as a bar to proceedings before the Justices for failure to notify This difficulty would be removed if the Act was amended by the addition of a clause enacting that the plea of ignorance of the nature of the complaint should not be held to be a valid one unless it was shown to the satisfaction of the Justices that the person charged with neglect to notify had taken proper steps to inform himself, either by obtaining medical advice or in some other sufficient manner "

Antiquated Methods in Vaccination —There has been no essential advance for nearly thirty years, in England, in the legislation regarding official vaccination The Local Government Board do not officially know that bovine lymph exists, and in fact have at times refused the city or county health authorities permission to supply it for the use of their public vaccinators No objection has been raised to the use of calf lymph, provided the vaccination is done directly from calf to arm, but any prepared or preserved lymph is open to objection by the Board The freshness of the vaccine is, according to the *Lancet*, November 14, the point of first consideration The tenor of all English laws from 1867 downward is directed to secure to the utmost that vaccination should be performed with fresh lymph from arm to arm, and hence the system of awards which the Act of 1867 provides for, carries with it compliance with that law and the regulations made under it The Local Government Board are therefore tied to this law just as the public vaccinator is, and they can not sanction departures from that law until it has been repealed, however much they desire so to do For some time past they have raised no objection to a public vaccinator using calf lymph, but since this departure from the regulations involves loss of award they feel bound, when the matter is put before them by letter, to explain that they have no power to authorize any change pending fresh legislation, and they issue a warning as to the chances of the loss of the award, which they can only grant under the existing law If guardians could have instituted calf stations, then vaccination with fresh lymph from calf to arm could have been carried out in the provinces just as it is at the Government calf stations in London From a letter which the Local Government Board have recently sent to the Cardiff guardians it appears that they have consulted the law officers of the crown as to whether this could be done, with the result that it had been decided that "the guardians of a union or parish can not themselves supply calf lymph to their vaccinators, unless, indeed, under some special emergencies involving an actual or anticipated outbreak of smallpox, such as are contemplated in Section 28 of the Vaccination Act of 1867 The Local Government Board are even more averse to the supply by guardians of preserved calf lymph, for they hold that it is the public vaccinator, as a medical practitioner, who must be held responsible for the character and source of any lymph which he uses, and that no guardians, whether individually or collectively, can by supplying him with lymph relieve him from this responsibility Where, notwithstanding these considerations, boards of guardians still insist that the public vaccinator shall use calf lymph and where that officer is himself ready to do so, although under the present regulations he would in consequence lose his award, there have been cases in which the guardians have raised the fee for vaccination, so as to cover the cost incurred by the public vaccinator in procuring a trustworthy supply of calf lymph, and we believe we are correct in saying that the Local Government Board have consented to such increase of fee Where this is done, the public vaccinator should to the utmost endeavor to secure that the vaccination shall be successful in not less than four places, and that his results shall not fall short of those which he obtains with fresh lymph from arm to arm The objections which have been raised to the effect that an equally efficient protection against smallpox is obtained by vaccination in, say, two places, must be regarded as having been set at rest by the conclusion at which the Royal Commission on Vaccination have arrived, when they say 'There is a very marked contrast between those with four or even three marks as compared with those with either one or two ' "

Description of the Disinfecting Station in Paris —The following is a copy of a report in the *Annales de Microscopie*, Nos 7 and 8, 1896, regarding the municipal service of disinfection for the city of Paris

In 1889 the city of Paris placed at the disposal of the people the municipal disinfecting stations attached to the stations of the municipal ambulance service There exists in Paris, four disinfecting stations 6 Rue Recollets, 71 Rue Chateau des Rentiers, 21 Rue Chaligny, and one in the Rue de Stendhal These establishments contain complete outfits for disinfection, both at the stations and at the houses The service is in charge of special agents who occupy position under the Director of Municipal Affairs, and under the supervision of the Inspector General of Public Health The study of the scientific problems of disinfection and the best mode of application of different methods is under the care of special agents, and is referred to a committee composed of some of the best men in France (Drs Proust, Charrin, Leon Colin, Gormil, Landowski, Ledé, Martin, Miquel and Vallin The principal station is the one in the Rue des Recollets, which is also the most centrally located This station has recently been enlarged by the addition of one more oven, making three in this station alone All of the four stations are operated every day, and an immense quantity of goods are thus disinfected The different stations are all built alike, two parts, entirely distinct from each other, are separated from each other by a partition wall, and in the rooms where the goods are handled by a metal partition up to level with the doors of the ovens The left of the building is the infected side, the right the clean or disinfected side, and between the two and on the front of the building are the rooms of the General Superintendent There exists no communication between the infected and the disinfected sides, except a passage which leads through wash and shower rooms and the doors of which are so arranged that the opening of any one door shuts all the others The construction of this station was begun in September, 1890, and it was opened for work in July, 1891 It occupies an area of 960 square meters, and the building occupies an area of 600 meters The cost of its construction was about 125,000 francs The system of receiving the infected goods, of preparing them for the disinfecting chamber, the process of steam disinfection, the discharge of the disinfected goods, the method of separating goods soiled with pus and blood, those containing grease spots and those infected with organisms highly resistant to heat, are all most perfect The disinfecting station in the Rue des Rentiers has annexed to it a night refuse for men, and contains two ovens That in the Rue de Chaligny, connected with the city ambulance service, has one oven, and the station in the Rue de Stendhal, connected with the refuge for women, one large oven, four meters long and one and three quarters meters in diameter This makes, in all the stations, seven ovens having steam under pressure The methods of disinfection employed in the municipal service are 1, the ovens having steam under pressure, 2, atomizers for the delivery of antiseptic fluids, 3, tubs of wood for the preparation of antiseptic solutions, 4, the portable outfit for house disinfection

The personnel of the service consists of one controller, four chiefs of stations, four engineers and seventy six disinfectors, ten of the first class, ten of the second class and fifty six of the third class Thus eighty five persons are permanently employed, making the total from 100 to 110 persons in all The men employed in the service have two uniforms, one, intended for a fatigue uniform, is composed of a vest, trousers and jacket of cloth, with silver buttons and an overcoat with a winter cape The other, intended for a working uniform, consists of a linen cloth pantaloons and coat, having a drawing string both at the top of the pantaloons and the bottom of the coat, and a cap with a neck cover and visor They also have a special form of foot wear When they arrive at the station in the morning to go to work, they leave all their clothing in a special ward robe, and then put on their working uniforms They must have their nails cut short and their hair and beards also trimmed short Before they dine they must go into the dining hall of the station and carefully wash their hands and faces with a solution of corrosive sublimate Every evening, before they resume their proper clothing for returning to their homes, they take a shower bath and wash themselves with antiseptic solutions

Goods for disinfection are brought to the stations either by private individuals or by the regular collectors of the service on the demand of the administration If the goods are brought by private individuals, the station is obliged to accept any thing that is brought, mattresses, clothing, rugs, furniture, hangings, carpets, rubber goods, stuffed goods and utensils of all kinds If the goods are brought by the regular collectors of the service, a selection is made, articles of furniture, glassware, trunks and glued wood are left in the house, while bedding, woolen goods, hangings, rugs, carpets, clothing, etc, are taken to the station A book is kept in which an account is kept in duplicate of the name of the owner, the address, the items of goods, the condition in which the goods were received, the day of deposit and delivery, etc The wagons which have served to transport infected goods are not allowed to leave the station until they have been cleaned and disinfected by means of the atomizers or by the aid of washing with the solutions commonly employed in the station. In collecting infected goods for transportation to the disinfecting station, the following rules are rigidly carried out. Upon leaving the station, each wagon is accompanied by a driver and two disinfectors. The wagons are closed with a glossy, impervious covering, and contain a sufficient number of canvas covers and sacks for carrying all the objects of bedding, clothing, carpets, etc., one or more atomizers, bottles to contain disinfectants to charge the atomizers holding 12 liters of a 1 to 1000 sublimate solution, a box of packages of sulphate of copper, each package containing 750 grams, one can of cresyl, rags, brooms, sponges, etc., and bags of sail cloth containing the working clothes of the men. For the transportation of very fragile objects, large wicker baskets are provided. The wagon goes direct and without delay to the house indicated by the chief of the station. Upon arriving at the house, they put on their working clothes and then proceed to the infected apartment. They then spray with an atomizer the place on the floor, and lay down the sail cloth covers, sacks and baskets. In these are placed all the objects to be transported to the station, after which they are hermetically sealed. After getting these articles out of the room, they load the atomizers and proceed to disinfect the walls, ceilings and wood-work, all articles of furniture left in place, picture frames, tables, glassware, etc., are all subjected to the action of the atomizer or are rubbed with rags wet with the solution.

The vases and utensils with which the sick have been served, also the water closets, commodes and toilet tables are washed without stint with a solution of sulphate of copper, 50 per cent. The disinfection with the sulphate of copper is practiced in all cases of intestinal diseases and for diphtheria and croup, the solution being jetted into the closets, sinks and sewer pipes. For very large surfaces, such as court yards, school room floors, stables, etc., a 5 per cent solution of cresyl is used. When the disinfectors are through with the premises, they place themselves before the atomizers and are thoroughly sprayed off. They then wash their hands and faces with the sublimate solution, place their working clothes in a sack and return to the station. They first give a receipt to the owner for all goods which they remove. Upon arriving at the station they unload the wagon in the hall on the infected side of the building destined to receive infected goods. The unloading finished, the wagon is disinfected both inside and outside with a solution of sublimate. The sacks are opened by a second set of men attached to the station and the articles sorted out. Those soiled with pus, blood, fecal matter, etc., being washed and rinsed in a tank of disinfecting solution before being placed in the steam oven. The arrangement of the articles to be disinfected on the car which carries them into the steam oven is a matter of importance, all metallic parts are covered with sail cloth and each object of bedding is extended on the screen and wrapped in sail cloth. These objects are not folded closely, but laid out with care. Those made of wool or feathers and which are liable to swell are placed on top. When the car is loaded it is rolled into the oven and the door closed. The routine of handling the oven is as follows. Introduction of steam at a pressure of seven tenths of an atmosphere for five minutes, a delay of one minute, and this is repeated three times. The oven is then opened on the disinfected side, the goods taken off the carriage and immediately shaken in the air to dry them and they are then laid on the drying screens, care being taken not to pile them up, and then a forced draught of hot air is sent over them and they are dry in fifteen or twenty minutes. The degree of pressure is indicated by a manometer and the steam is cut off automatically at the end of five minutes. The steam disinfection having been successfully carried out and the goods removed without damage, they are returned in wagons which are used only for this purpose and handled by men who never come into contact with infected goods. Upon the delivery of the infected goods the receipt is taken up by the driver of the delivery van. Goods of vegetable texture or bad colors which are liable to run or fade are generally treated by spraying, or with as little steaming as possible.

Disinfection of the sick room during the course of the disease is often done, but the agent does not enter the sick room unless requested to do so. They disinfect the clothing of the sick person the commodes, closets and utensils. They carry away for steam disinfection the bedding and soiled articles and leave a bag for the reception of those articles soiled during the course of the disease, and exchange this bag for another as often as occasion requires. In 1895 there were 8,215 of these disinfections performed, and in 1896, up to date, there were 9,875.

The appropriations accorded to this service for the year 1895 was 362,012 francs. Of this, 353,000 francs were for the general service and 9,000 francs for the disinfection of schools. The first of these items is disbursed in the following manner:

	Amount in francs
1 Controller, 2,400 francs	2,400
4 Chiefs of stations, 2,368 francs	9,472
4 Engineers, 2,260 francs	9,040
10 Disinfectors, first class, 2,153 francs	21,530
10 Disinfectors, second class, 2,046 francs	20,460
56 Disinfectors, third class, 1,939 francs	108,595
Substitutes for those who been taken sick	2,000
Extra work and express	500
Total	174,012
Horses, wagons and salaries of drivers	95,000
Chemicals and disinfectants	20,000
Fuel and light	12,000
Wear and tear on wagons	3,000
Wear and tear on atomizers	10,000
Wear and tear of material	5,800
Blouses and replacing the same	7,700
Contributions, taxes and sundry expenses	1,000
Printing and postage	4,500
Car fare	3,000
Clothing of the disinfectors	8,400
Breakfast for the employes	8,600
Grand total	353,012

The Regulations of the Indiana State Board of Health.—The Indiana State Board of Health has issued the following Health Circular (No. 5). Special rules governing physicians and health officers when visiting persons sick of contagious and infectious diseases, and directing the proper conduct of quarantine. Passed Oct. 6, 1896.

Explanation.—It will be admitted that not a few practitioners are careless, and that there are some who do not understand or do not appreciate the care they should exercise in their own person when visiting patients sick with contagious and infectious diseases.

Quarantine, too, seems not to be thoroughly understood, for instances are not rare when the posting of a flag or a red card constituted all that was done, the flag being relied upon as a fetish. In such instances the physician takes no precaution against infecting himself, neighbors call and return to their homes at will, and the members of the stricken household are not restrained. Under such circumstances, contagious diseases will surely be spread in all directions. The laity frequently ask "How do doctors keep from spreading disease?" They do spread disease in some instances, and to prevent the carrying of contagion by physicians and others is the object of these rules. Example will materially aid in instructing the people, and so these rules carefully set forth the conditions under which practitioners shall visit patients when they know them to be sick with diphtheria, scarlet fever and other infectious diseases. The conditions imposed are not difficult to fulfill and are not burdensome, and even if they were, no objection could be reasonably advanced against them if they were really necessary. An instance may be given which will fully illustrate the need of these rules.

In a village smitten with diphtheria a health officer visited, with a local physician, one of the cases. A card was upon the door and it was discovered that that constituted the quarantine. Two women and a young girl were within attending the sick child. One of the women was a neighbor who had kindly offered her aid, and she held the child in her arms, its head upon her shoulder.

From here this good woman was soon to return to her home to prepare the evening meal for her family. For depressing the tongue the same spoon had been used without washing or sterilizing since the beginning of the disease. The mother of the child grasped the spoon by the infected handle and offered it to the visitor. A soiled handkerchief lay upon the bed. This was handed by one of the ladies to the other who proceeded to wipe the mouth and nose of the child and then toss it onto the bed. With hands and clothing reeking with poison these good women infected everything they touched. Flies were abundant and busily at work aiding in the transmission of the disease. The attending physician preferred to have the child upon his knees when he took its temperature and pulse. The drops of saliva which passed onto his coat sleeve were wiped off with his handkerchief and he went forth to pay another visit. The health officer perceived a smile upon the face of his companion when before entering the sick room he removed coat, cuffs and hat, produced a clean, glossy linen duster and skull cap from a glazed hand bag, and donning the garments announced himself as ready to see the patient Another smile was provoked when upon leaving the sick room a bowl of water was called for, the hands and face washed with the aid of a cake of carbolic soap taken from the bag, and a disinfectant freely used

The above facts impelled the passing of the following rules, and it is hoped they will be obeyed to the letter that humanity may be served and the medical profession honored

The use of diphtheria antitoxin is recommended in all cases of diphtheria, and it is especially recommended that all persons who have been exposed to diphtheria be promptly immunized with it

The justice and propriety of Rule 6 is plain when we remember it has been proved beyond any question that many simple red throats are really caused by the true diphtheria bacillus A recent writer tells of a trained nurse who observed that wherever she went to nurse, diphtheria broke out She had taken every precaution against carrying the disease, having had several Turkish baths, used antiseptics and made an entire change in her clothes, yet the disease followed her Investigation showed her mouth to be alive with diphtheria bacilli She was quarantined and given thorough antiseptic treatment After the bacilli disappeared diphtheria did not again show itself in her track

RULE 1 When visiting patients known to be sick with small pox, scarlet fever, diphtheria or other contagious or infectious disease, physicians shall clothe themselves in a specially provided clean linen duster, oil cloth or rubber coat and a tight fitting cap made of silk, linen, oil cloth or rubber The cap shall well cover the hair Before leaving the house, physicians shall cleanse hands and face with antiseptic soap and water, and use a disinfectant upon hands and face The coat, cap, antiseptic soap, bottle of disinfectant, etc , shall be carried in a special glazed leather valise, together with a pad of cotton, which is to be kept wet with formaldehyde [1]

RULE 2 Physicians shall give full and explicit instructions to parents, nurses and attendants concerning every precaution to be taken against the spread of infectious disease When possible, patients shall be placed in a room which, for the time, shall not be entered by others than those who nurse, and only the physician and nurses shall be admitted Every article of tableware or of apparel used by the patient shall be sterilized or destroyed by fire as soon as possible Pieces of old soft cloth shall be used for wiping the mouth and nose of the sick They shall be used but once and then immediately destroyed by burning, or sterilized by boiling for one half hour or more in water

RULE 3 Physicians shall promptly report to the proper health officer all cases of contagious or infectious diseases, to which they are professionally called

RULE 4 Health officers shall, upon receipt of any reliable information of a contagious or infectious disease immediately flag the house and establish *rigid* quarantine, and shall distribute printed rules concerning the sanitary management of the household during the continuance of the quarantine

RULE 5 When there is doubt whether or not the disease is diphtheria, physicians and health officers having the case in charge shall send to the State Board of Health or to other competent authority for serum tubes, that cultures may be made and the case immediately decided The work will be done without cost by the State Board of Health

RULE 6 When diphtheria prevails in a community it will be necessary to consider every case of sore throat diphtheria until the contrary is proved and rigid *quarantine shall be maintained in mild as in severe cases*

RULE 7 In all cases of death from diphtheria, membranous croup, scarlet fever and other contagious or infectious diseases the funeral shall be strictly private, and the corpse shall be buried within twelve hours after death No public or church funeral shall be held, or any person permitted to enter the house containing the remains except the undertaker and his assistants, unless by permission of the county or local board of health or their officers Health boards and officers shall enforce this rule

RULE 8 The room in which there has been a case of contagious disease dangerous to the public health must be immediately disinfected following the recovery of the sick or the removal of the remains, as follows, to wit All surfaces should be thoroughly washed with a solution of corrosive sublimate of the strength of 1 part in 1,000 parts of water The walls and ceiling, if plastered, should be brushed over with this solution, after which they should be whitewashed with a lime wash Especial care must be taken to wash away all dust from window ledges and other places where it may have settled, and to thoroughly cleanse crevices and out of the way places After this application of the disinfecting solution and an interval of twenty four hours or longer for free ventilation, the floors and woodwork should be well scrubbed with soap and hot water, and this should be followed by a second more prolonged exposure to fresh air, admitted through open doors and windows School books or books from a circulating library shall not be taken into or removed from any house during the prevalence of any contagious disease dangerous to the public health, and if such books have been in such houses during the prevalence of said diseases, they must be destroyed by the owner or library authorities, or be properly disinfected before being returned to schools or put in circulation Health boards and officers shall enforce this rule

RULE 9 Any person or persons failing or refusing to comply with either or any of the foregoing rules, shall be subject to the penalties provided in Section 9 of an act establishing a State Board of Health, passed Feb 19, 1891

D C RAMSEY, M D , President
J N HURTY, M D , Secretary

BOOK NOTICES

Transactions of the Colorado State Medical Society, twenty sixth annual convention By laws and list of members Denver, June, 1896 Cl , 8vo, pp 448 Published by the Society

This excellent volume contains forty seven papers read before this Society Many of these have made their appearance in the various medical journals

The Colorado Medical Society has a membership of 300, and is taking an active interest in the organization of a *united* medical profession

A Text book of Physiology By M FOSTER, M A , M D , LL D , F R S Sixth American edition Thoroughly revised, with notes, additions and two hundred and fifty seven illustrations Cl , 8vo, pp 930 Philadelphia Lea Brothers & Co 1896

The editor of this edition says that in its preparation "every page has been subjected to careful scrutiny and considerable liberty taken with the text Useless verbiage has been omitted, obscure sentences have been revised or entirely rewritten, a large number of typographic errors have been corrected, histologic details (except of the nervous system) have been materially abridged, etc "

This promise of a thorough revision has been faithfully carried out, as an inspection of the text shows, and there is no doubt Foster will retain the preeminence accorded him by the profession in the past As a scientific text book it is one of the best

Reference Book of Practical Therapeutics By various authors Edited by FRANK P FOSTER, M D , editor of the *New York Medical Journal*, Foster's Encyclopedic Medical Dictionary In two volumes Vol I (A—Myrtol) Cl , 8vo, pp 652 New York D Appleton & Company 1896

This book is as its name implies a *reference book* of practical therapeutics It might have truthfully been called a dictionary of therapeutics, for the topics are arranged alphabetically, and are treated with the conciseness and exactness of an encyclopedia "The leading idea," [illegible]rites Dr Foster, "in the preparation of [illegible] has [illegible] to make it preëminently serviceable to [illegible] It is not intended to take the place of [illegible]dica or pharmacy "

[illegible] work is n[illegible] of the method of

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[1] The disinfectant recommended is a 1 to 5 000 solution of corrosive sublimate a 5 per cent solution of carbolic acid or 1 per cent solution of lysol A cake of sublimated or carbolic soap may be conveniently carried in a traveler s soap box The cotton pad is kept in the case or bag to absorb the formaldehyde This chemical is our greatest antiseptic and its vapor will destroy all germs

It will be well to add to the above outfit a roll of paper napkins and a bundle of small flat pine sticks to be used as tongue depressors The paper napkins are suggested because towels can not sometimes be found at the houses of the poor, and if they were found might be infected Having one s own napkin gives perfect independence The wooden tongue depressors may be whittled out of pine or better obtain from seed dealers the flat pine markers for flower beds which gardeners use They cost seventy cents per thousand

The outfit here d[illegible] ma[illegible] [illegible]ained comple[illegible] from the When Cloth preparation and use of official articles and remedies recognized by the pharmacopeia, but as well includes various proprietary remedies in use by the profession There can be no two opinions of the usefulness and great merit of the work, but it is greatly to be regretted that the editor has adhered to the old system of dosage throughout It is possible, however, that a posologic table may be contemplated for the second volume, in which event the omission would call for less comment But in this period, when our own pharmacopeia long ago adopted the decimal system, and twenty years after its formal adoption by the AMERICAN MEDICAL ASSOCIATION, and when the Committee of Revision of the British Pharmacopeia are themselves about to adopt it, when every modern chemistry and nearly every modern work on physiology has adopted it, when the American Association for the Advancement of Science has adopted it, and every English speaking society of chemists has adopted it, it looks like a backward step to adhere to the obsolete English system, and we trust that the forthcoming volume may join the decimal procession

The general plan adopted here is bound to meet with favor, and the book may well be placed on the most convenient shelf, for we predict that few books will be consulted more frequently by the busy practitioner, and the editor has added to his literary laurels by the conception and prosecution of a work in every way so useful

There are thirty three contributors to this volume, and their work is marvelously well done

The publishers have given it handsome type and good paper, and in that respect there can be no criticism

A **Text Book of Bacteriology,** including the etiology and prevention of infective diseases and a short account of yeasts and moulds, hematozoa and psorosperms By EDGAR CROOKSHANK, M B Professor of comparative pathology and bacteriology, and fellow of King's College, London Fourth edition Reconstructed, revised and greatly enlarged Philadelphia W B Saunders, Chicago agent W T Keener 1896 8vo, cloth, pp 712 Price $6 50 net

The present edition of Crookshank has so many changes in the text that it is essentially a new work Twenty six chapters have been added The chapters are divided as follows 1, historical introduction, 2, morphology and physiology of bacteria, 3, effect of antiseptics and disinfectants on bacteria, 4, chemical products of bacteria, 5, immunity, 6, anti toxins and serum therapy, 7, the bacterial microscope, 8, microscopical examination of bacteria, 9, nutrient media and cultivation, 10, experiments upon living animals, 11, examination of air, soil and water, 12, photography of bacteria, 13, suppuration, pyemia, septicemia, erysipelas, 14, anthrax, 15, quarter evil, malignant edema, rag picker's septicemia, 16, septicemia of buffaloes, deer, rabbits, pleuro pneumonia, swine fever, fowl cholera, grouse disease, 17, pneumonia, infectious pneumonia, influenza, 18, plague, relapsing fever, typhus fever, yellow fever, 19, scarlet fever, measles 20, smallpox, cattle plague, 21, sheep pox, foot-and mouth disease 22, horse pox, cow pox, 23, diphtheria, 24, typhoid fever, 25, swine fever, 26, swine measles, distemper in dogs, epidemic disease of ferrets, epidemic disease of mice, 27, Asiatic cholera, cholera nostras, choleraic diarrhea from meat poisoning, dysentery, choleraic diarrhea in fowls, 28, tuberculosis, 29, leprosy, syphilis, rhinoscleroma, trachoma, 30, actinomycosis, madura disease, 31, glanders, 32, tetanus, rabies, louping ill, 33, foot rot, 34, foul brood, infectious disease of bees in Italy, pébrine, flacherie, infectious disease of caterpillars, 35, classification of species Appendices 1, yeasts and moulds, 2, hematozoa in man, birds and turtles, hematozoa in equines, camels, fish, hematozoa in frogs, 3, psorosperms or coccidia, ameba coli, 4 apparatus, material and reagents employed in a bacteriologic laboratory, 5, bibliography, supplementary appendix, extracts from the final report of the royal vaccination commission

The work has always been a favorite in England, and in this country it has only had a limited sale, but it is one of the best works on the subject and should be welcomed to every laboratory The complaint urged against the former edition that the plates were so highly colored as to be unnatural is an objection that has now been removed The mechanical execution is all that could be desired

The Practice of Medicine, a text book for practitioners and students with special reference to diagnosis and treatment By JAMES TYSON, M D , Professor of clinical medicine in the University of Pennsylvania, etc Illustrated Philadelphia P Blakiston, Son & Co 1896 8vo, cloth, pp 1184 Price, $5 50

This work not only represents the work of a practitioner of great experience, but of a careful culling of the facts set forth in contemporary literature by one who well understands the art of separating the true from the false The chapter on typhoid fever is excellent but it contains no reference to the blood diagnosis of typhoid, nor to the antiseptic method of treatment

In malarial fever the method of blood diagnosis is fully described, indeed, this is one of the most satisfactory chapters in the book

In cholera the value of M Haffkine's protective inoculations are conceded Cantani's method of enteroclysis is approved and DaLand's experiments thereon at Swinburn Island are quoted at length

In diphtheria the author says there are three principal indications, "*first*, to prevent constitutional infection, *second*, to support the system, and *third* to combat the toxin " These indications according to the author are met by the local use of germicides and disinfectants, by 2, resolving supporting treatment, and by 3, serum therapy The constitutional treatment is mainly by bichlorid of mercury (002 to 005 gm) There is an interesting chapter on "the intoxications" which here has reference to alcoholism, morphinism, cocainism, chloralism, lead poisoning, arsenic poisoning, ptomain poisoning and grain poisoning

Section 15 is devoted to a summary of the symptoms following overdoses of various poisons, which are given in detail, a table giving the minimum dose which has caused death and the maximum dose followed by recovery accompanies this section The appendix contains useful tables for conversion of Fahrenheit into centigrade scale, for reducing the metric system into English et cet

We are pleased to note that the metric system has been used throughout the work, which is certainly in every way admirable

ASSOCIATION NEWS

List of Presidents of the American Medical Association

To answer inquiries and for the information of the members we have compiled a list of the Presidents of the ASSOCIATION from the beginning

Dr Jonathan Knight, (President of the convention)	
Dr Nathaniel Chapman	1847-48
Dr Alexander H Stevens	1848-49
Dr John C Warren	1849-50
Dr Reuben D Mussey	1850-51
Dr James Moultrie	1851-52
Dr Beverly R Wellford	1852-53
Dr Jonathan Knight	1853-54
Dr Charles A Pope	1854-55
Dr George B Wood	1855-56
Dr Zina Pitcher	1856-57
Dr Paul F Eve	1857-58
Dr Harvey Lindsley	1858-59
Dr Henry Miller	1859-60
Dr Eli Ives	1860-63
Dr Alden March	1863-64
Dr Nathan S Davis	1864

Dr Nathan S Davis, (held over)	1865
Dr D Humphreys Storer	1866
Dr Henry F Askew	1867
Dr Samuel D Gross	1868
Dr William O Baldwin	1869
Dr George Mendenhall	1870
Dr Alfred Stille	1871
Dr D W Yandell	1872
Dr Thomas M Logan	1873
Dr Joseph M Toner	1874
Dr W K Bowling	1875
Dr J Marion Sims	1876
Dr Henry I Bowditch	1877
Dr T G Richardson	1878
Dr Theophilus Parvin	1879
Dr Lewis A Sayre	1880
Dr John T Hogden	1881
Dr J J Woodward	1882
Dr John L Atlee	1883
Dr Austin Flint	1884
Dr Henry F Campbell	1885
Dr William Brodie	1886
Dr E H Gregory	1887
Dr A Y P Garnett	1888
Dr W W Dawson	1889
Dr E M Moore	1890
Dr Wm T Briggs	1891
Dr Henry O Marcy	1892
Dr Hunter McGuire	1893
Dr James F Hibberd	1894
Dr Donald Maclean	1895
Dr Nicholas Senn	1896

NECROLOGY

Thomas S Orr, M D , of Alexandria, Ky , aged 56, died December 7 Dr Orr was graduated from the Medical College of Ohio in 1869, and he was probably the best known practitioner in northern Kentucky He had been suffering from mental disease for some time He leaves a large family

Henry Gasset Davis, M D , formerly of New York city, and latterly of Everett, Mass , died recently at the ripe age of 89 years He was a native of Trenton, N J , born there Nov 4, 1807 He was a descendant of Dolor Davis, one of the early settlers on Cape Cod The *Boston Medical and Surgical Journal* has a biographic note showing how Dr Davis came to take up the study of orthopedic surgery In the year 1835, he visited a sister, who was under treatment for lateral curvature of the spine, and became impressed that the plan of treatment, although the best then known to the practitioners in charge of the case, was susceptible of improvement This led him to take up the study of medicine and to devote especial attention to this branch of surgery In the winter of 1835-36 he attended lectures at New Haven, and was under the instruction of the professor of surgery The next spring he went to Bellevue Hospital He graduated from the Yale Medical School in 1839, practiced in Worcester a short time, and then went to Millbury, where he treated a large number of patients from the surrounding towns In 1855 he left Massachusetts for New York city Here he treated patients from all parts of the United States and from abroad, and also wrote a book on diseases of the thigh and hip He was the inventor of several ingenious appliances He was a man of ideas rather than of scholastic attainments, and as such disregarded erroneous traditions of the past and opened a way to the great advance made in America, especially in the study and treatment of hip diseases

Dr Vialle one of the editors of the *Actualité Médicale* of Paris He left his entire fortune, about $50,000, to the benevolent institution known as the Hospitalité de Nuit

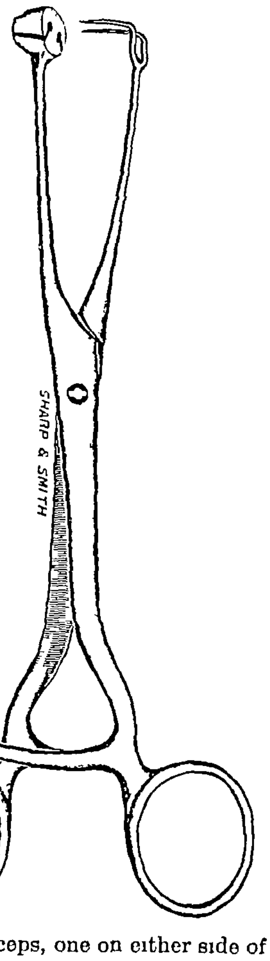
Dr Hertzog of the University of La Paz, Bolivia, whose works on hygiene and medicine have won him a national reputation He was assassinated for some political reason just after his election to Congress His funeral was made a national affair

NEW INSTRUMENTS

A NEW INSTRUMENT FOR STEADYING THE UTERUS DURING CURETTEMENT, TRACHELORRHAPHY, ETC

BY A L CORY M D

I think most gynecologists will agree with me that we need a better instrument for steadying the uterus in curettement, trachelorrhaphy, etc Formerly we used a tenaculum Its hold is but slight, and during late years most of Chicago's operators have used a pair of the American bullet forceps, its hold on the cervix is not much greater than that of the tenaculum, and if handed to an unskilled assistant to hold while the operator inserts and spreads the dilator or needles, he is very apt to pull too hard and tear out the instrument I have seen quite extensive lacerations or tears from this cause in my own and in many other operators' cases An improvement was the use of two bullet forceps, one on either side of the cervix, the assistant putting the fingers of one hand through the loops in the handles of both pair, but even then one pair would tear out For the last year and a half I have been using a small volsella which was made to hold ovarian tumors This has three hooked teeth on each blade, and with a strong assistant, the injury from its use is frequently more than I am pleased with Some time since, while in the store of Messrs Sharp & Smith, surgical instrument dealers of Chicago, Mr C E Clare called my attention to a newly imported French tongue holder It occurred to me that here was what I was looking for to steady the cervix I procured a pair and have had great satisfaction in their use The lower blade has two round, strong needles set at right angles to the blade, about one half inch apart The upper blade has a piece of metal attached, with sockets in it to receive the needles I can grasp the cervix with this instrument and have no fear of its being torn out, and when the operation is completed and the forceps removed



there remains only two small punctures such as would be made by passing two good sized round needles

4101 State Street, Chicago

THE PNEUMATOPHOR

This apparatus is designed to carry a large supply of air to breathe in places where it is impossible to breathe otherwise, in mines, fires, etc It consists of a large bag suspended from the shoulders, with a mouthpiece as large as the trachea, so that there is no effort in breathing, and a spring that fits over the nose and closes it The compressed oxygen (100 atmospheres), and the solution of soda to absorb the carbonic acid gas, are each contained in a receptacle opened automatically from without Nitrogen is omitted as unnecessary ballast The entire apparatus weighs only 4 5 kilograms, and folds up in a small pocket when not in use It supplies air enough to sustain life for two hours in repose, and for over half an hour with the most violent exercise It is described in full and illustrated in the *Therap Woch* for November 22, and has already rendered valuable services in mines, etc Certain scientific investigations hitherto impracticable, in regard to the amount of oxygen consumed, etc , have been made possible by this invention, and in cases where it is advisable for the patient to inhale oxygen or medicines without effort, it promises to be of great assistance It is the invention of Gartner of Vienna, and has already been adopted by the fire department there after severe tests The superintendent of the mines at Wittkowitz states in a technical journal that it far excels any other apparatus of the kind by its small bulk, its light weight, and its easy and rapid "in operation setting" which render it the rescue apparatus *par excellence* in mine explosions and fires

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MISCELLANY

Mental Fatigue and Exercise —It has been generally accepted that muscular exercise, gymnastics, was beneficial after continued mental effort, and school children are often put through a course of gymnastics to dissipate their mental fatigue after the morning's study But Bum and others now declare that recent tests have demonstrated that fatigue from mental exertion is increased by muscular exertion, and that nothing will dissipate this fatigue but physical and mental rest, viz sleep —*Therap Woch* , November 22

Case of Intoxication from Scopalamin —Valude describes a case of intoxication with vertigo and delirium in a woman of 65, after the instillation of three drops of a solution containing one gram of hydrobromate of scopalamin to 200 grams of water The instillation was made twice, to dilate the pupil for ocular examination It resembles atropin in its effect for this purpose, and Valude has frequently used it where atropin was contraindicated on account of possible glaucomous complications The delirium passed away the next day, but the patient retained a certain volubility of speech and her mouth remained parched and eyes abnormally bright As she was of an extremely nervous temperament, with previous attacks of hysteria, he ascribes the intoxication to some exceptional nervous susceptibility, as scopalamin has always hitherto been well received by his patients —*Journal de M de P* , November 22

One Location for Oregon Insane Asylums —Under the provision of the constitution of the State of Oregon "that all the public institutions of the State, hereafter provided for by the legislative assembly, shall be located at the seat of government," the supreme court of that State holds unconstitutional, in the case of State v Metschan, Nov 9, 1896, the act of the legislature (Laws 1893, p 136) authorizing the establishment and maintenance by the State of a branch insane asylum at some point in Eastern Oregon That an insane asylum is a public institution of the State within the meaning of the constitution it thinks is too clear for argument, though educational institutions are considered otherwise All such institutions as come within this construction, of being strictly governmental in their character, must be located at the place designated in the constitution, although it may now seem desirable to do otherwise, until the consent of the people is obtained in the form of a constitutional amendment

Must Not Go out on Car Steps to Vomit —While it may be said, in the sense of decency, that it would be proper for a boy nearly 15 years of age, who is a passenger on a crowded excursion train, when admonished of the fact that he is about to vomit, to make an effort to avoid befouling his fellow passengers and soiling the car, yet, even under this view, the supreme court of Indiana says that the law would not justify him in exposing himself to peril, or excuse or mitigate his negligence when he seeks redress in an action for injuries sustained To further illustrate The court holds, in Cleveland, C , C & St L Ry Co v Moneyhun, decided October 21, 1896, that it is a clear and undoubted case of contributory negligence, which can not be controverted from any legal standpoint, for one under such circumstances to go out through the door of the vestibule and down on the lower step of a car in rapid motion to vomit, even though he may try to hold on to the railing

Acetabulotome —It is a difficult matter to make a correctly shaped acetabulum with the ordinary Hoffa or Lorenz spoon, in the operation for congenital luxation of the hip Jagerink of Rotterdam has invented a special instrument for the purpose which scoops out the correct cavity almost instantly, and with no danger of cutting too deep It also leaves it perfectly clean, as all the scraps and bone dust are taken up in the center of the instrument It is described and illustrated in the *Ztsch f Orth Chir* , No 4, and consists of a hollow ball augur The ball is in two vertical halves and is also cut down to the center, thus dividing the upper half of the ball into quarters, with a narrow space between Each quarter is sharpened to a knife edge on the side toward the right, and curves slightly inward around to the other side As the handle is turned the screw within turns the ball, the four knife edges cut into the bone and scoop all the scraps into the center The instrument is made in three sizes of balls, respectively 2½, 3 and 3½ cm in diameter There are also patterns of the holes made by the balls, so that it is easy to fit the head of the femur in them, and determine the exact size required J C Trompert, Rotterdam, is the manufacturer

Consent to Abortion no Bar to Action for Damages —A complaint charging that all of the defendants save one entered into collusion with that one to perform upon the body of the plaintiff a criminal operation and an abortion, the supreme court of Wisconsin holds, in Miller v Bayer, Oct 13, 1896, clearly charges the defendants with entering into an unlawful combination to injure the plaintiff by performing upon her an abortion Nor does the court consider it necessary, where the action is brought to recover damages, that the complaint should negative justification on the ground of necessity of saving life, for the reason that if the act was justifiable, the facts in that regard are a matter of defense In this case it was further contended that the plaintiff could not recover, because she submitted to the operation performed upon her Such, however, the court holds is not the law It says that consent by one person to allow another to perform an unlawful act upon such person does not constitute a defense to an action to recover the actual damages which such person thereby received

Anthropology as a Positive Science —Dr Hrdlicka, one of the numerous expert medical witnesses in the Barberi murder trial at New York, is reported to have put in the following strong claim as to the position of anthropology and criminology It is remarkable, to say the least and mildest, with how much irony and even sarcasm such a positive and important science as anthropology is treated by men, lay and even others, who ought to know better. It should be made clear that, far from reposing on the presumptions and hypotheses, anthropology has for its greatest basis, and may be demonstrated to mainly consist of, the facts and nothing but the facts of the most positive of all medical sciences, namely, anatomy, and that its deductions are not guessing, nor even inductions, but simple, authorized judgments, of no less value than many every day purely medical and surgical opinions. Anthropology and its daughter, criminology, are sciences whose value will be manifested, whatever obstructions ignorance may pile in their roads, and that in the not far future.

Prophylaxis of Insanity.—On account of the importance of heredity in the production of insanity, it has been suggested that applicants for a marriage license should be required to present the certificate of a life insurance company, but as this is not practicable, Parisot (*Journal de M. de Paris*, of November 22), appeals to physicians as the only guardians possible in such cases to realize their responsibility and exert all their influence to prevent marriage on the part of those whom they know to be mentally unsound. He also urges the necessity of legislation to secure pure liquors, as long as it is impossible to prevent their consumption, stating that drunkenness, or even being drunk at the moment of conception is sufficient to engender idiot, epileptic or insane children, quoting Bautru's remark that the saloon is a place where insanity is sold by the bottle. He demands police regulations to prevent the spread of syphilis and adds that in cases of syphilis with mental complications, the rôle of the physician in interfering to prevent marriage is especially important.

Culpability of Mediums in Suggested Crimes.—An article of over forty pages in the October *Archives Cliniques de Bordeaux* calls attention to the serious consequences that may ensue when persons more or less predisposed to nervous or mental troubles, consult the frauds known as magnetic healers, mediums, somnambulists, etc. Numerous examples are described in full, presenting a dark picture of the evils that follow in many cases, ranging from hysteria to insanity and murder. It is surprising that the real culprit in many cases—the medium—is not prosecuted, and as in the Jean Fort murder case, the murderer is condemned to penal servitude when all experts agree that he is not responsible in any degree for the crime, while the medium who suggested it, continues her baleful practices unmolested. It states also that the number of insane criminals who would have been sent to an asylum instead of to the galleys if their mental condition had been understood, amounts to more than five hundred in the last five years alone in France.

May Give Opinion as to Nearness of Shot.—It is well settled that medical experts may give an opinion as to the means by which a wound was inflicted. But the supreme court of Kansas goes farther, and holds in the homicide case of State v. Asbell, November 7 1896, that a medical expert, qualified by study and experience, who examined the body of the deceased shortly after the wound was received, may give his opinion as to whether it was produced by a near shot or one fired from a distance. The reason which it gives for this is that the characteristics of the wound, such as the color and condition of the skin around it, the coagulation of the blood mixed with powder, the depth of the wound, and the disturbance of the tissue throughout, can not easily be communicated to the jury, and some of the indications which would mean much to the expert could not well be described to an inexperienced person, the symptoms and characteristics of near wounds not lying within the range of common experience or common knowledge.

How to Change Linen into Silk for Surgical Purposes.—Linen threads are not much used in surgery on account of their tendency to twist and knot and the difficulty of threading them. A Russian physician, Professor Gubaroff, has invented a process which imparts to linen all the properties of silk and, as it is much less expensive, promises to supersede silk in military surgery. The ordinary "English" linen, made in Saxony, is first cleaned of grease by boiling in a soda solution, and after being well rinsed and sterilized in a vapor bath, is dried again. Then it is dipped dry into a 5 per cent. solution of photoxylin or celloidin (which is a concentrated form of collodion), with alcohol and ether in equal parts. It is then stretched on a frame to dry, when it will be found to have all the properties of silk thread. To transform the linen into silkworm gut it is dipped again and again into the celloidin, carefully drying between the dips, and finally polishing with a piece of cotton dipped in alcohol, to which a little ether has been added. This thread is strong enough to be substituted for the silk in sutures destined to be removed later, and it resembles the silkworm gut in all its desirable features. The addition of one half of one per cent. of castor oil to the celloidin solution imparts an extra flexibility. It is best to keep it in a dry state, although it will stand a sublimate solution, but alcohol must be avoided.—*Cbl. f. Chir.*, October 31.

Money Paid for Partnership not Recoverable.—It is alleged in the case of Herrington v. Walthal, decided by the supreme court of Georgia Aug. 18, 1896, that one physician paid another $1,000 to be taken into partnership with him for a term of two years, and that the latter inconsiderately departed this life and thus dissolved the partnership a little more than three months after the partnership was formed. After the former had failed to recover the whole $1,000 from the administratrix of the latter, his petition being adjudged fatally defective in asking for the full amount and setting forth no facts upon which an apportionment could be made, he amended his complaint and asked for an apportionment on a time basis, or for seven eighths of the $1,000. But the court declares that it would require but little reflection to show that an apportionment upon this basis would be entirely arbitrary, and says that the truth is that it does not believe it possible in a case like this to set forth any facts upon which a just and equitable apportionment could be made, and it accordingly affirms a judgment for the defendant. If the purchaser was introduced to the community as the partner of a physician in good repute and enjoying a remunerative income, it says that it would seem from the standpoint of conjecture, that he must have derived more benefit than the sum of $125 from this association, especially in view of the fact that by the death of his partner he in all probability succeeded to a practice which he might not have been able to build up in years.

Pliny's Botanic Gardens and Some Later Attempts.—The *Popular Science Monthly* for December has an article on botanic gardens, in the course of which it says that after the discovery of the medical properties of plants, it must have followed, in course of time, that representatives of the species to which remedial properties were attributed should be collected and grown in some place conveniently and readily accessible as need demanded. The last step did not immediately follow, however, since among the conditions which were earlier supposed to influence the potency of medicinal herbs, the locality in which grown, and the mysteries attending their collection were of the greatest importance. The first authentic record of the introduction of medicinal plants into cultivated plots of ground dates no farther back than the time of the elder Pliny, (23-79 A.D.) who writes of the garden of Antonius Castor, at Rome, in which were grown a large number of medicinal plants. This step may have been taken much earlier by the Greeks, Chinese or Mexicans, however. Later the Benedictine monks of Northern Italy paid great attention to the growing of remedial herbs, and devoted an important proportion of skin at par it aids and relieves the other eliminative organs of the body Thus as an aid in the preservation of health it has a distinct and useful place in our armamentarium

A form of bath which appears to have many advantages as a therapeutic agent, but which I have never seen used, is the half bath The technique is briefly as follows, eight or ten inches of water at a moderately warm temperature in the tub, patient sits in the water with cold towel around the head, patient and attendant rub the body well while attendant pours and dashes the cold water over the head, shoulders and back This is continued from ten to thirty minutes friction being kept up all the time A most excellent thing in this bath for some conditions, especially respiratory affections, is the affect gained by dashing the cold water on the body The after-treatment is the same as in the full bath which is given below

The full bath is typified in the Brand bath I will run over rapidly the main points as described by Baruch in Hare's System of Therapeutics Patient is prepared by giving a stimulant just before being put into the bath (one-half to two ounces of brandy) Preparations are screened from patient because of psychic disturbance Tub is rolled up to the side or end of bed, and patient after having face and chest bathed with ice-water (I have found serviceable a towel soaked in cold water applied to the head) is lowered into the water which is at the required temperature, according to the condition of patient The whole body, up to the chin, is immersed in the bath, and immediately the attendant or attendants, two are preferable, begin applying *gentle friction* to the surface of body with the open hand Patient will complain that he is freezing and can not breathe, but reassure him and keep him in the bath for at least fifteen minutes, continuing friction all the time The best guide to the safety of the bath is the condition of patient Cyanosis of lips or face is a signal that circulation is failing and we must remove the patient at once Another sign of collapse is a thready and rapid pulse After remaining in bath about fifteen minutes, lift the patient up gently, letting the water drip off for a minute, and lay him over on a linen sheet spread over a blanket The sheet is wrapped around him, being tucked between arms and chest and between limbs If temperature had been high, above 103 degrees, the blanket is also wrapped snugly around him, and he is left with hot bottles at his feet to sleep, but if temperature was below 103 degrees when he was put into bath, he is rubbed dry with the sheet and towels and put to bed [At this stage I have always found it a good plan to give a little stimulant (one-half to one ounce of whisky) Osler recommends the same in his "Practice "]

The bath which is most used I think, especially in private cases, and which I found gave splendid results, was the so-called "graduated full bath " It is simply a cooling of the water gradually after the patient is in the full bath, by adding either cold water or ice The same methods are followed out as in the Brand bath, except that the length of time in the bath is increased to double The patient does not undergo the intense shock of being suddenly plunged into ice-cold water

The therapeutics of the cold bath may be summed up as follows, 1, as antipyretic, 2, as a general nervous and muscular sedative and tonic Osler thus sums up the good effects in typhoid fever, 1, the reduction of fever, 2, clearing the intellect, lessening stupor and disappearance of muscular twitchings 3, general tonic action on nervous system, especially the heart, 4, insomnia lessened, 5, most important of all the mortality is reduced to a minimum Hare in the Boylston Prize Essay on "Fever, its Pathology and Treatment,' says "Cold bathing is a power for good before which every other measure must stand aside "

The idea is quite prevalent in this country among the laity, and indeed to a deplorable extent among the profession, that the use of the cold bath is restricted, if used at all, to typhoid fever I wish to draw your attention more particularly to its use in other diseases than typhoid The brilliant results achieved in this disease can be found by referring to almost any recent work on the "Practice of Medicine " And the erstwhile unknown and unsung Brand of Stettin has floated, and justly so, into the realm of fame in his tub, as did Diogenes of old

Its use in the exanthemata is sometimes of great advantage In *typhus* it was used by Currie in an outbreak in Liverpool in 1792 He used cold sea water a 60 degrees F , and poured it " over the naked bodies of those whose strength was not greatly reduced, and whose heat was steadily above the temperature in health " He had great success with this disease Jurgensen recommends it in his work "Pathologie und Therapie " Osler says it "should be thoroughly and systematically employed as in typhoid Strümpell says, "besides good nursing a judicious employment of baths is certainly our chief reliance for lessening the severity of many of the symptoms, such as febrile, nervous and pulmonary disturbances, as well as for averting many dangerous complications " Manuel Dominguez, Professor of Therapeutics in Medical School of City of Mexico, writing in Hare's System of Therapeutics, speaks in the highest terms of the use of cold baths in this disease, but personally prefers to use the tepid bath

Scarlet fever —Again let me quote that great pioneer in hydrotherapeutics, Currie, in his experience with this terrible disease in his two boys, showing his perfect confidence in the efficacy of the cold bath to do all that could be done "I shut myself up with these boys, and with plenty of pump water and a pocket thermometer prepared, not without anxiety, to combat this formidable disease As soon as the sensation (of heat) was steady in my eldest boy, I stripped him and poured four gallons of water over him of the temperature of 64 degrees The usual good effects immediately appeared, but at the end of two hours he was as hot as ever, the remedy once again applied, and repeated as the return of heat indicated By the time the eldest was ready for his third affusion, the youngest was ready for his first The heat rose in the eldest to 109 degrees, in the youngest to 108 degrees, and the pulse in each was upward of 150 In thirty-two hours the first had the affusion fourteen times, eight times cold, twice cool, and four times tepid, twelve affusions sufficed in the case of the youngest, of which seven were cold The fever in both was completely subdued On the morning of the third day they were both evidently safe " He also reports 150 cases treated by the cold bath

Osler says on this disease, "In cases of high and and rapidly increasing fever the graduated bath should be used " Strümpell says the same thing Dr Hiram Corson of Pennsylvania says, "rarely has any one made a more careful trial of any remedy than I have made of this, in a practice of fifty-nine years, under the daily watch of intelligent physicians, anxious no doubt for my success, but doubtful of the propriety of my practice, and too timid to resort to measures to them so heroic And now in closing my career as a practitioner, and looking back on the countless fights I had with death in hovel and in palace, I can truthfully declare that no means ever used by me, or which have ever been known to me as used by others, in scarlet fever, have so successfully warded off its blows and shielded patients from harm and restored them to health as the use of cold water and ice " Dr Alexander Goldstein[1] reports from the Buda Pesth epidemic of 1891, 231 cases of scarlatina in which cold baths were chiefly used When they needed an antipyretic the baths were used in preference to all others, and his testimony is, they "acted excellently " The good effect was not only in lowering the temperature, but also in improving respiration, innervation and cutaneous action They used a form of the graduated bath, pieces of ice moved back and forward in the water causing waves of cold to impinge upon the body Dr Reimer, who treated over 3,000 cases of scarlatina by various methods, has the following to say about cold baths "The efficiency of full cold baths was undoubted in scarlet fever, if they were used methodically and with proper precautions The patient is plunged into a tub half filled with water at a temperature of from 57 to 54 degrees F After removing him from the water, he must be rubbed briskly and wrapped in a woolen blanket The temperature frequently drops several degrees, patients are much relieved and desire a repetition In scarlatina the indications for hydrotherapy vary with the progress of the disease " His experience with the gradually cooled bath is that it is pernicious in this disease Ziemssen also adds his testimony to the good effects of the cold bath in scarlet fever, putting it before antipyretic drugs

In *smallpox* the use of the cold bath is limited Currie and others used it to some extent Strumpell recommends it in the initial stages to reduce fever Osler says the cold bath at 70 degrees F, repeated every three hours in cases of pyrexia combined with delirium and subsultus is much preferable to the medical antipyretics But the general concensus of opinion does not recommend it as a routine practice, the warm or tepid bath being preferable in the eruptive stage

The other exanthemata rarely demand the use of the cold bath, but if the fever rises very high, there is no better remedy than the cold bath to equalize it

Rheumatic fever For the very high fever sometimes encountered in this disease we have a most valuable remedy in the cold bath, and in fact the only agent which has proved of any use in combating the extreme hyperpyrexia The results obtained, the reduction of temperatures which had reached the flood-tide mark of 110 F are certainly remarkable, and stand as an incontrovertible argument for the efficacy of the cold bath as an antipyretic

Neither Strümpell nor Osler in their text-books on practice have much to say upon the treatment of hyperpyrexia in rheumatism, but both recommend the cold bath or cold pack as the best agents to use Stewart of McGill University, Montreal, says "When hyperpyrexia has set in, it is useless to employ drugs of any kind to reduce it It is only wasting valuable time, the only measure of real value is cold, and it is clear from the general experience on this point that the sooner it is employed the better are the patient's prospects for recovery The general cold bath is certainly the most effectual way of carrying out the antipyretic action of cold, in some cases a single bath is all that is necessary " In others as many as twenty-six have been given Wilson Fox collected a series of twenty-two cases from 1867 to 1871, temperature from 106 to 111 7 degrees eighteen were treated by ordinary means, without cold, and all died The other four were treated by the cold bath, three recovered, highest temperature being 110 degrees Dr Male collected in the ten years ending 1890 sixteen cases, temperature from 106 to 110 4 degrees The pack was used in eight, with two deaths, and the bath in the other eight with one death Baruch reported a case, temperature 106 degrees, cold bath given and ice applied to joints, recovery Medley, Murchison, Ringer, Charcot and others have reported cases with temperature reduction of from 5 to 8 degrees The Committee of the Clinical Society of London made the following report on sixty-seven cases from the ten years ending 1879 Synopsis given by White in his "Text-book of General Therapeutics " "Of the cases that were not bathed only one in which the maximum temperature exceeded 106 degrees recovered, of the cases that were bathed, fifteen (or five-eighths of the total) in which the maximum exceeded 106 degrees recovered Again six out of eleven fatal cases which were not bathed, the maximum was under 106 degrees but in only three out of the twenty-two fatal bathed cases was it so low Often the treatment is of no avail, but on the other hand it frequently turns the scale toward recovery, when the temperature has not reached an extreme height In a considerable number of deaths, recourse to bathing has been too tardy to be effectual The treatment must be begun without any delay whatever, directly hyperpyrexia, however slight, is detected, and must be persevered in unremittingly so long as the temperature remains high The committee truly says that a strict watch must be kept for the prodromal signs, two, which are most noteworthy, are delirium and a cessation of the articular pain Cold bathing not only reduces the temperature, but also allays the delirium, brings down the frequency and increases the strength of the pulse and promotes sleep even in the most desperate cases If it were made a rule to put the patient *in a cold bath whenever the temperature* reaches 105, the mortality in rheumatic hyperpyrexia would greatly fall " But great care must be taken in these cases for they are all in a very precarious condition when they reach the point of needing the bath And the true rationale of the cold bath as an antipyretic must be borne in mind—do not literally swamp the internal organs with the hot blood by driving it all away from the surface Especially watch the weakened heart in the cases that are treated late

Insolation—In this condition where high fever exists the cold bath is the only efficient remedy to combat it In this as in rheumatic fever extreme temperatures are often successfully reduced, the patient being brought from a state of gravest collapse to a condition of comparative safety I have seen cases brought in unconscious with temperature from 107 to 109 degrees F, recover with bath treatment

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[1] Baruch Uses of Water in Modern Medicine

Anemia —In 1878 M Thermes demonstrated with Hayem's hemometer that the judicious application of cold to the periphery increased the number and improved the quality of the red blood corpuscles And Winternitz has demonstrated an improvement in the oxyhemoglobin constituents, by Fleischel's hemometer And to these Baruch adds his testimony of numerous cases of anemia and chlorosis yielding to hydriatic measures after iron treatment had proved futile Professor Shattuck of Harvard University (in Hare's Syst Ther) also recommends for this disease, after vigorous frictions of the body in the mornings, the cold affusions while seated in a few inches of warm water

Phthisis —Winternitz says in a recent article in the *Deutsche Medicin Wochenschrift* that cold water is the best means to fortify the system against phthisis by reason of the general tonic influence on the system And further in cases already advanced the cold water decreases the fever, increases the body weight, decreases the night sweats, lightens and diminishes the cough and expectoration, and other subjective complaints, there is an improvement of the local conditions, lessening and disappearance of the bacilli, and these statements he has proven by clinical work

Pneumonia —Before the Tenth International Medical Congress in Berlin, Dr A H Smith read a paper in which he showed the true rationale of heart failure, which is the fatal element in pneumonia, to be the overwork of the right heart in trying to force blood into the consolidated lung tissue And as a remedy for this he proposed to dilate the blood vessels of the remainder of the body so they could hold some of the blood that was flooding the right heart To accomplish this he advocates medicinal remedies But have we not most efficient and rational aid to the fulfilment of the indications in the cold bath? Medicinal agents can not maintain for any length of time the dilatation of the cutaneous vascular system unless the tone of the vessel walls is assured The cold bath while rendering this necessary aid, at the same time gives tone to the whole nervous system, strengthens the respirations, stimulates the heart, quiets delirium, reduces the temperature, and gives the patient a much needed rest and sleep All this I have seen accomplished by the cold bath And while my personal experience has been limited to one case, that one was so markedly benefited by it that a lasting impression was made upon me The case came into Gouverneur Hospital, New York, one morning with a temperature of 100 degrees F, and fine râles in one lung By evening the temperature had risen to 106 degrees F, pulse 130, respiration 45, rapid consolidation going on in lung, and patient getting delirious There was a typhoid patient in the same ward being bathed every three or four hours, and everything being convenient and patient almost *in extremis*, I had him given a plunge both at 79 degrees F which was gradually reduced with ice to 40 degrees It lasted about ten minutes This bath did not reduce the temperature very much, but the general effect upon the patient was good Delirium disappeared The following morning, temperature still being quite high, another bath was given at from 72 to 44 degrees F, and from that time the temperature continued to fall until it reached normal on the fourth day of the disease The patient had a rise of temperature on the ninth day, but nothing in the lungs to account for it It went up to 102 6 degrees suddenly on the evening of the twelfth day, and as suddenly down again below normal the next morning For six days these remissions occurred when temperature went to normal and stayed there, patient soon afterward recovering perfectly I saw patient some weeks later and found lungs normal and healthy

The percentage of mortality has been, and still is so high in pneumonia, that any means of lowering it should be received with favor by the profession, and especially when this means is based upon a rational physiologic foundation, proven by thousands of trials sanctioned and conducted by the best clinicians of the day And yet so great is the timidity or shall I say conservatism, of the profession at large, that I doubt if one practitioner in a thousand could be found to give the cold bath a trial in his private practice, or even the cold pack, for which neither the patient nor doctor seem to have the same horror

Since the old adage that " figures can't lie" has been reconstructed to read " nothing is such a convincing liar as figures," I will not attempt to give you the record of thousands of cases from some of the best men of this and other countries, but will content myself with presenting to you some of the opinions of these men, formed from large experiences

Strümpell recommends the cold baths in severe cases, not for the pyrexia simply, but for their effect upon the respiration and nervous system Jurgensen advocates the very cold baths, preceded by stimulants, and he confirms his recommendations with wonderful results obtained Penzoldt says after treating 2,200 cases "If the indication is, beside reducing temperature to improve the circulation, respiration and cerebral activity, and further expectoration, preference should always be given to a cautious bath treatment " Fismer reduced the mortality almost half in 230 cases treated by baths as against the same number treated without Vogl (Baruch, "Uses of Water in Modern Medicine"), chief of Munich Military Hospital, has found the bath, as in typhoid, of great value in pneumonia Dr Boardman Reed of England, says in a paper on pneumonia " that water locally applied either by wet pack or in the form of baths, after the Brand method, is the most efficient single remedy or therapeutic measure for acute pneumonia " In our country we find Osler recommends it in very high fever Pepper says of pneumonia in children that when high fever is present recourse may be had to strong antipyretics " but hydrotherapic measures are more efficient " He recommends cool and cold sponging, cold pack and baths Graham of Jefferson Medical College says that pyrexia often reaches a dangerous height in pneumonia, and " undoubtedly the safest and most reliable means of reducing this pyrexia or hyperpyrexia is by the external application of cold " "The cold bath has," he says further, " notwithstanding its advocacy by many prominent American physicians, and the lessened mortality following its use, never become popular in this country " This he attributes to the necessity of portable tubs and attendants And finally Simon Baruch says " We have every indication in the treatment of pneumonia fully met by the properly adopted bath, namely, 1, to reduce the temperature, 2, to tone up the action of the heart, 3, to refresh the failing nerve supply of the heart and lungs, 4, to deepen the respiration, 5, to enlarge the surface of the blood, 6, to restore the lost tone of the capillaries " I can not agree with Baruch in his sweeping statement that "every indication is fully met by the bath" But this point I wish to emphasize, if used judiciously in conjunction with other remedies its value is of unmeasured worth

Abuses and contra-indications —It is certainly a fact that one disastrous case from cold bathing will do and indeed has done, more toward creating a feeling of antagonism to the method than 1,000 cases of undoubted success will do toward forwarding it, and that, in spite of the fact that it was done ignorantly, or in direct disregard of all physiologic laws Baruch mentions a case in point A young hospital physician and teacher expressed abhorence of the cold bath treatment of typhoid, and when asked why, he said he had seen a nurse killed by it, and this is the description of their method as given by him "We endeavored to reduce her temperature by wrapping her in a sheet, placing her on a Kilbs cot, and sprinkling her with ice water" Do you wonder that it proved to be her winding sheet? And Baruch gives another instance of the same method being used in one of the hospitals of a large city Another way in which the cold bath is brought into ill repute is by not exercising the proper amount of care in selecting the cases for baths Patients with atheromatous vessels, with organic heart disease, with hearts which are already on the verge of disolution from some exhausting disease, should never be put in the cold bath Indeed, I am of opinion that there are some nervous organisms which can not stand the cold plunge even in health lacking the one desideratum, namely, the ability to react quickly and completely While mentioning the abuses of the cold bath in therapeutics, it will not be out of place to give a very striking instance of the extent to which their fervor will carry some in using it as a hygienic measure I was told by a young man who had been in the habit of taking a cold bath every morning, that he was in the country and arising early and having no means handy for taking his accustomed cold bath, he went down to the river and breaking a hole in the ice, jumped in He was fortunate to escape serious results but it demonstrates the folly of carrying any measure to extremes The one cardinal point always to be borne in mind in health and disease is *to get reaction*

And now in closing let me emphasize the point, that although the cold bath is a great aid in the battle against disease, it is not a specific for the germ disease, nor in fact for any disease It is only one of the agents to combat the symptoms, but *a powerful one* And if used rationally, understandingly, conscientiously, I think you will agree with me in giving it its rightful place among the foremost therapeutic agents of the day

The Cairo Flats

THE URINE IN DIABETES MELLITUS

BY ARTHUR R ELLIOTT, C M , M D

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While diabetes mellitus is not a disease of the kidney, it finds its chief clinical expression in certain profound alterations in the character of the urine This fact renders the study of that secretion of primary importance in the diagnosis and management of the disease The great practical value of urinary analysis in these cases is generally recognized, but the importance of painstaking and frequently repeated examinations is not so extensively appreciated An analysis which includes only the detection of sugar and the estimation of the specific gravity and reaction is rudimentary and neglects many valuable considerations Close observation of the urine will help us to a more perfect understanding of the progress of the case and its prognosis, and will result in the early detection of developing complications

I have been impressed by the comparatively casual manner with which the urinary changes of this affection are considered in special and general text books, and the following detailed description of the urine in this interesting condition is inspired thereby In no disease are the urinary changes more profound Hardly a single character, physical or chemic, escapes some alteration Most marked are those affecting the physical characters of the urine Usually the first symptom to attract the attention of the patient is the polyuria Impressionable and nervous patients become immediately much alarmed on this account The quantity of urine in nearly every case of true diabetes mellitus is greatly increased, the average range being from eight to fifteen pints daily It has been known to exceed thirty-two pints, and Bence Jones reported a case in which the daily excretion reached seven gallons The quantity, while constantly increased, varies greatly from day to day and at different times of the day It bears a pretty constant relation to the excretion of sugar, the polyuria diminishing with improvement in the glycosuria and consequent diminution of thirst No more water is excreted by the kidneys than is ingested, as was formerly alleged Polyuria is one of the most constant urinary signs of diabetes, and if a high specific gravity be associated with it, is of considerable diagnostic importance In rare instances the disease is not attended by polyuria Frank has named this exceptional form "diabetes decipiens" Such cases are generally considered less serious than those in which the urine is abundant The color of diabetic urine depends much upon the degree of dilution Typical diabetic urine is a pale amber, but when not attended by marked polyuria it may be of dark color When heavily charged with sugar it may have a greenish hue The quantity of urine secreted during the night is as a rule less than during the day, contrary to the general rule in pathologically induced diuresis Diabetes is often ushered in by a pre-glycosuric diuresis lasting for a considerable time Likewise a post-glycosuric polyuria attends convalescence when a cure of the disease takes place This latter is probably accounted for by the polydipsia which persists for a considerable period after the sugar has disappeared from the urine

The urine in this affection constitutes a marked exception to the general rule that increase in quantity is attended by a diminution of specific gravity, for notwithstanding its large volume, the density is high This is due to the presence of sugar and to the augmented excretion of urinary solids The specific gravity has been noted as high as 1070, although the average range is between 1028 and 1045 It is not invariably increased, however Saunby, Flint, Cameron and others have reported cases of undoubted diabetes mellitus attended with low specific gravity Such cases are rare, and when met with should be regarded with suspicion, appeal being made to the phenylhydrazin or fermentation tests to prevent error, as faulty reduction of the cupric oxid tests by nonsaccharine reducing substances may have taken place In addition the urine should be submitted to careful microscopic examination for casts and be tested for albumin, as an incipient interstitial nephritis may coexist

Urine heavily charged with sugar may have a diminished consistence When shaken such urine forms an abundant froth This does not subside as quickly as does that of normal urine, but is less creamy and permanent than the froth of highly albuminous urine

The transparency is not usually altered Indeed, in this condition the urine is notably clear and free from sediment, as a rule Occasionally, however, and most frequently is this the case in gouty subjects, the urates may be precipitated Upon standing, the urine may assume a bright and opalescent hue, and if exposed to warm air for a time, a white flour-like deposit of yeast fungus forms in the bottom of the vessel If indican be present in excess, as it frequently is in this condition, the urine becomes red upon standing, from oxidation of that product Blood has been noted as a deposit in advanced cases

The odor of diabetic urine frequently resembles that of hay, but in advanced cases may possess the peculiar chloroformic order of acetone This often precedes the development of diabetic coma and when present should excite apprehension The urine has a distinctly sweet taste from the presence of sugar In certain rare cases air is voided with the urine This pneumaturia arises from a formation of gases in the bladder consequent upon fermentation changes in the urine

The chemic reaction is invariably acid unless complications exist, and, as a rule, more sharply so than in health This acidity persists apparently undiminished during the "alkalin tide" after meals, and is not affected to any degree by the administration of alkalin remedies Upon standing the urine becomes more acid, alkalin fermentation being long delayed On the other hand, alcoholic fermentation quickly supervenes, the specific gravity at the same time being lowered from the conversion of sugar into alcohol Derignac has pointed out that the acidity is increased with the acetonemia of diabetic coma The total daily excretion of urinary solids is increased

A brief glance at the condition of the normal urinary constituents will develop some important and significant facts The elimination of urea is almost invariably increased, and this is the case throughout the disease Occasionally we notice a fall in the excretion of urea without assignable cause, and such an event frequently presages diabetic coma The increase of urea is brought about by a variety of causes They are briefly, 1, largely increased ingestion of nitrogenous food rendered necessary by the anti-diabetic dietary, 2, increased tissue metamorphosis, 3, great functional activity of the liver, 4, to some extent to the washing out of the tissues by the diuresis This increase in urea bears a direct relation to the severity of the disease

Other urinary solids are also affected, although to a less extent The excretion of uric acid is slightly increased as a rule, although it is seldom seen as a deposit The reason for this is that the largely diluted urine exercises an increased solvent power in proportion to its dilution, and keeps the uric acid in solution when it would otherwise appear as a deposit Occasionally, in gouty subjects, a precipitate of urates is observed Frequently an improvement in the patient's condition and a diminution of the polyuria is attended by a deposition of urates and uric acid crystals

The inorganic constituents of the urine, the chlorids, phosphates and sulphates, are as a rule somewhat augmented This is partly due to the diet and partly to the washing out of the tissues It is well to bear in mind that this increase in the urinary solids is not a relative one, but an absolute increase The large dilution of the urine may result in their proportionate diminution, while in the aggregate they are increased

Indican is found in excess in diabetic urine, and when exposed to the air such urine becomes deeply red The increase is greatest just before and during coma, probably the result of the constipation and intestinal fermentation accompanying that condition

According to Stadelmann, Von Norden, Wolpe and others, ammonia is frequently present in large amount, but is neutralized by the beta-oxybutyric acid present and the urine remains acid An increase in hippuric acid and creatinin has also been noted

While the foregoing facts are important clinically, it is upon the presence of sugar in the urine that the diagnosis rests The mere presence of sugar or copper-reducing substance will not suffice for a diagnosis of diabetes mellitus It is necessary to establish beyond doubt its presence as a constant product in the urine, and also the fact of its excretion in some considerable quantity in order to distinguish from other and less serious forms of glycosuria The average range of sugar excreted is over 4 per cent not uncommonly rising to 7 or 8, or even 12 per cent The total daily excretion may be but a few drams or may reach a pound or more It fluctuates greatly from day to day, varying with the diet and physical condition An intercurrent attack of fever or some grave disturbance of the general system will sometimes result in a diminution or total disappearance of the sugar for a time It is also diminished before and during diabetic coma Starchy foods, mental worry, over-exertion, biliousness, are among the causes which increase the glycosuria

The tests most commonly used for the detection of sugar in the urine are the cupric oxid tests, and of these Fehling's method has been for years the one most generally employed In common with the others of this class, it depends for its reaction upon the power which glucose possesses of reducing cupric oxid to lower forms of oxidation with the formation of a yellowish or red precipitate soluble in ammonia For the detection of large quantities of sugar in the urine, Fehling's test is a reliable method When however, but a small quantity is present, its results can not be depended upon In its application we are directed to add the urine to the boiling test drop by drop until reduction takes place or until as much urine has been added as we have test solution The quantity of solution employed is usually one dram

There are certain non-saccharin substances present in the urine which reduce cupric test solutions, and they constitute a fertile source of error when but slight reduction takes place Of these substances the most misleading, because present in normal urine, are uric acid and kreatinin With Fehling's solution concentrated normal urine will almost invariably produce a reaction closely resembling that due to small quantities of sugar This pseudo-reduction is owing to the presence of these two substances in excess, their proportions being raised by the concentration of the urine The large quantity of urine used in the application of Fehling's test renders it very susceptible to this error If a smaller quantity be used its delicacy is impaired It is with urines of high specific gravity and increased acidity that we exercise the greatest care in testing for sugar A high specific gravity does not by any means always indicate the presence of sugar, for very frequently we see concentrated urine with a density of 1025 to 1032 which contains no sugar Such urine produces false reduction of Fehling's test solution, consequently in cases where discrimination is essential this method is most unreliable and misleading Glycuronic acid is another possible cause of error It is present in excess in the urine after the ingestion of camphor, chloral and chloroform and gives rise to a reduction of the copper tests closely resembling that produced by glucose The smaller the quantity of urine that is used in testing the less likely is this mistake to occur In addition to these sources of error in using Fehling's test, its instability, the influence which the presence of albumin has in interfering with the reduction, and its well-known tendency under certain circumstances to undergo spontaneous reduction, are other objections to its use

It is important to be able to recognize minute traces of sugar in the urine, for while such may give rise to no appreciable symptoms, they are indicative of a tendency which may at any time, unless corrected develop into diabetes mellitus This can not be accomplished with certainty by Fehling's method for reasons already recited In striving to accomplish this end and at the same time overcome the disadvantages of the methods in common use, I have evolved the following method,[1] which has thus far in my hands given most satisfactory results It is delicate, recognizing with certainty as small an amount of sugar as 1 per cent, while requiring the employment of but a very small quantity (8 drops) of urine, thus possessing the two great essentials of a perfect test for sugar In addition it is simple, easily applied and accurate, and its reaction, even with the smaller quantities of sugar, is easily distinguishable It is prepared and applied as follows Solution No 1

Cupric sulphate C P	grs	xxvij	1	60
Glycerin pure		ʒiij	12	
Distilled water		ʒiiss	10	
Liquor potassæ	ad	℥iv	128	

Dissolve the copper sulphate in the glycerin and water Gentle heat will facilitate its solution When cold add the liquor potassæ, mix thoroughly and filter

Solution No 2 is a saturated solution of chemically pure tartaric acid in distilled water

These solutions, when carefully prepared, are quite stable and with ordinary care will keep unimpaired for months

Into a test tube pour one dram of the cupric oxid solution (No 1) and gently boil over a spirit flame Then add two or three drops—never more—of the tartaric acid solution and boil again The solution remains perfectly clear and transparent and is of a beautiful blue color Now add the suspected urine drop by drop, boiling and shaking the test between each drop until reduction takes place or until eight drops of urine have been added If no reduction follows the addition of this amount of urine, sugar is not present The end reaction is a yellowish-red deposit of cuprous oxid which is marked and unmistakable The reaction deepens when allowed to stand for a few moments

Applied in this manner this test will detect one part in 1,000 of urine, or less than one-half grain to the ounce If the percentage of sugar be large, a single drop of urine will promptly develop the reaction The addition of three drops gives a marked reduction with two grains, and four drops will detect one grain to the ounce of urine In applying the test care must be taken not to use a larger quantity of the tartaric acid solution than three drops to the dram of copper solution If more than this be used the character of the reaction is affected, a discoloration rather than a precipitate being produced, and the delicacy of the test is also somewhat impaired A greater quantity of urine than eight drops should not be used By so doing greater delicacy may be obtained, but reliability will be sacrificed for increased sensitiveness, and the special value of the method destroyed The presence of albumin in the urine does not act as a deterrent to this reaction

Glycuronic acid, when present, gives rise to considerable confusion in testing for sugar It is found in normal urine in such small quantity as to be considered practically absent, but after the administration of certain drugs it may appear in considerable amount, in which event it throws down a heavy precipitate with copper test solutions, indistinguishable from the reduction produced by grape sugar This condition was erroneously considered a form of glycosuria by the older observers If its presence misleads, certain discrepancies in the urine such as low specific gravity, absence of polyuria, together with absence of the physical symptoms of diabetes and a history of the taking of one of the drugs mentioned, will excite suspicion of error, and an appeal to the fermentation or phenylhydrazin test will clear away all doubt The latter is the most reliable qualitative test for sugar, as that substance is the only urinary product which produces the characteristic reaction It is an excellent appeal test when the indication of the copper reduction method is doubtful Its application, however, consumes some time, and the phenylhydrazin is inconvenient to handle and very irritating to the skin Havelburg's modification will be found much easier to carry out than the original method of Von Jaksch It is applied as follows Place 20 grs (gm 1 20) of phenylhydrazin hydrochlorate and 30 grains (gm 1 80) sodium acetate in a test tube and fill almost half full of distilled water and slightly warm An equal quantity of the urine is now added and finally a little chloroform, and the mixture shaken If the test tube be allowed to stand the chloroform soon settles to the bottom, and if sugar be present a layer of fluid forms above it, containing the crystals of phenylglucosazone Some of this layer of fluid is gently withdrawn by a pipette and mounted on a slide, and examined under the microscope for the characteristic crystals

Having established the fact of the presence of sugar in the urine it remains to determine its quantity This should be invariably practiced in cases where sugar is found in the urine, for by the knowledge so gained we are assisted to a definite understanding of the disease and its prognosis Repeated estimations will enable us to closely watch the progress of the case and observe the effects of treatment It is not now the unsatisfactory procedure that it once was Modern methods have done much to simplify the process and now with inexpensive apparatus and the expenditure of a few minutes of time the knowledge so essential to the conduct of the case can be gained

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[1] New York Medical Journal, July 27, 1895

The methods most used are the fermentation method, optical saccharimetry Fehling's method by titration and the ammoniated cupric tests, which include Pavy's and Purdy's methods I have adapted my own method previously described for the detection of sugar so that it may be employed for quantitative estimation after the manner of the ammoniated cupric tests A comparison of the different methods just enumerated will not fail to demonstrate the superiority of this class of tests As they require but a few minutes for their application the estimation may be made without delay, indeed while the patient waits, an important practical advantage which the others do not possess Furthermore the results are accurate, uniform and reliable

The advantages which characterize my method as a qualitative test render it also especially applicable for quantitative estimation It is a test which is easily applied and possesses a singularly clear and transparent end reaction The principle of the method in common with the others of the ammoniated cupric class is that the cuprous oxid formed by the reducing power of the sugar is held in solution by ammonia which is added for that purpose, the test remaining clear and transparent throughout, the end reaction being the complete disappearance of the blue color

The test is employed by taking 133 minims of the cupric oxid solution (No 1) in a narrow necked glass flask and adding thereto 6 drops of the tartaric acid solution and 3 drams (cc 12) of liq am U S P Mix thoroughly and add distilled water to raise the total volume to two fluid ounces (cc 64) The resulting solution is perfectly clear and transparent This amount of test solution so prepared represents in sugar value one-fourth grain of grape sugar, that is, it is reduced and decolorized by exactly that amount of sugar The necessary apparatus is a glass flask with narrow neck, a retort stand, alcohol lamp and minim pipette The reagent prepared as described is brought to the boiling point over a spirit flame and while smartly boiling, the urine is added from the pipette slowly drop by drop allowing a few seconds to intervene between each drop until the blue color has entirely disappeared from the test solution As the color fades it is well to proceed more slowly with the addition of the urine The addition must be stopped immediately the color has entirely disappeared and the number of minims employed should be noted To facilitate observation of the progress of decoloration a white background may be used If now 480 minims (cc 32) be divided by the number of minims required to decolorize the test and the quotient be divided by 4 we obtain the number of grains of sugar to the ounce of urine Knowing the total excretion of urine it is a simple matter to estimate the total loss of sugar for the twenty-four hours If the urine be heavily charged with sugar greater accuracy may be obtained by diluting it before testing with 2 volumes of distilled water and multiplying the result by 3 There is no difficulty in determining the exact point of complete reduction After decoloration the solution is clear and transparent with a slightly opalescent hue In clearness of reaction this test excels all others of its class This is due partly to its extreme delicacy and also to some extent to the fact that it is freshly prepared for each application Notwithstanding their alleged stability the other tests deteriorate to some extent after being kept for a length of time and this detracts from the clearness of their end reaction It is well to bear in mind the following precautions in applying this test If the urine be dropped in too slowly and the boiling is thus much prolonged some suboxid may be thrown down because of evaporation of the ammonia before decoloration is complete The test solution should be kept steadily boiling until reduction and decoloration are complete, as any interruption of ebullition will permit the entrance of air to the solution, thus producing possibly some reoxidation of the reduced oxid, which would render the result slightly fallacious These accidents with a little care can be readily guarded against Upon standing after decoloration the blue color gradually returns to the solution This is owing to absorption of oxygen from the air and the reformation of the blue protoxid from the suboxid held in solution by the ammonia The accuracy of the results of this method may be verified by the employment of a solution of known strength of chemically pure grape sugar in distilled water or normal urine

Microscopically there is nothing 'characteristic in the urine of diabetes mellitus unless it be the presence of yeast plants (saccharomyces urinæ) These little cells when present may be taken as positive evidence of the presence of sugar I have frequently observed that highly saccharin urine is very prolific in mucus cylindroids These are due no doubt to irritation of the mucous surfaces by the highly acid abnormal urine

In view of the frequent development of interstitial changes in the kidneys during the progress of diabetes and the important bearing which such have upon the prognosis it is well from time to time to submit the urine sediment to careful microscopic inspection for casts The frequent association of casts and diabetic coma would furnish other reasons for care in this direction The sediment of diabetic urine is as a rule very sparse The high density of such urine greatly delays the deposition of the light hyaline casts in the sediment and thus renders their detection often very difficult Since the introduction of the centrifuge into urinary work this difficulty has been overcome In the sediment obtained by centrifugal force these casts if present can always be detected

The irritation of the urinary passages by the highly acid abnormal urine and the lowered vitality and powers of resistance always present in these cases, result in the frequent occurrence of suppuration at some point of the urinary canal If such be present the microscope will reveal the characteristic pus and epithelial elements

Not the least among the advantages to be derived from analysis of the urine in this disease is the discovery of certain conditions which may develop during its course, which have an important bearing upon prognosis and treatment For this reason frequent pains-taking uranalyses should be made, for by their early detection we are often warned of impending danger and may be enabled by instituting prompt measures to evert or postpone some grave complication In this manner a sudden fall in specific gravity and the excretion of sugar and urea without corresponding amelioration of the physical condition should be regarded with apprehension as these phenomena frequently preceed diabetic coma The urine should be at once submitted to the ferric chlorid test Of the significance of this reaction Halliburton says "Whatever the substance may be that causes the reaction, its appearance is of grave import often foretelling the onset of coma and death " According to this authority ethyl diacetic acid is the cause of the reaction Von Jaksch also considers that it often forebodes diabetic coma, and Bouchard in his valuable work on "Auto-intoxication" ascribes to it considerable value as a prognostic sign He says " In nearly all cases of diabetic coma, perhaps in all, we find this color reaction of the urine In diabetes this reaction may serve as a basis of diagnostic and prognostic indication " Bouchard states his belief that the substances producing this reaction are the result of defective elaboration of matter by the human organism and are largely formed in the intestine Among these substance are acetone, diacetic acid and oxybutyric acid, all of which are poisonous From these statements we might expect that careful regulation of the diet and a course of intestinal antiseptics and digestants with measures to combat constipation if instituted early in the disease and persistently maintained would have a decided effect in postponing this fatal complication With this color reaction, a fruity chloroformic odor of the breath and urine, an excess of indican and an increase in acidity of the urine are frequent accompaniments

The appearance of renal casts is also significant of developing coma In twenty cases of diabetic coma Sandmeyer found numerous casts in every instance They were present both during the prodromal symptoms and when the coma was marked Kulz more recently in observations conducted in 400 cases likewise found casts both before and during coma No difference was noted in their number whether the coma terminated fatally or in temporary recovery The latter event was followed by disappearance of the casts from the urine A small amount of albumin was frequently but not invariably present The appearance of casts would seem to be a prognostic sign of value in these cases In this connection care must be exercised not to mistake for casts the cylindroids so commonly present in diabetic urine and which often bear a strong resemblance to light hyaline casts It is also well to bear in mind the fact that casts are frequently present in the urine of diabetics due to interstitial changes in the kidneys brought about by prolonged irritation Prognostic significance can only be attached to their appearance when the urine has previously been quite free from them

Albuminuria is a symptom of frequent occurrence in diabetes and is therefore worthy of attention Bouchard has pointed out that it is present in 43 per cent of cases Smitz found that in 1300 diabetics 824 were also subject to albuminuria Marie alleges that such cases are principally arthritic diabetics The albuminuria is usually slight, frequently but a trace of albumin being present, or it may reach one gram in the twenty-four hours, beyond which amount however it seldom goes unless complications exist The prognostic importance of this sign depends upon the grade of the albuminuria and more especially upon the association of symptoms of Bright's disease If the latter be associated with it the prognosis is grave The following are some of the most frequent causes of albuminuria in diabetes

1. Irritation by the sugar during its excretion, bringing about degenerative changes of a hyaline character in the small arteries and the epithelium of the renal tubules

2 Suppurative conditions of the urinary passages to which diabetes are so predisposed

3 The largely increased ingestion of albuminoid foods

4 The increased liability of diabetics to various morbid changes because of poor nutrition and lowered resistence

5 Derived albumin the result of dissimilation

6 A coexisting nephritis

In rare instances the albuminuria and glycosuria may alternate These cases Sir Dyce Duckworth considers of a gouty nature The albuminuria has been known to substitute the glycosuria, sugar disappearing entirely from the urine When albumin is present a microscopic examination should invariably be made Occasionally a case is met with in which the degenerative changes in the kidney progress and assume the ascendency The nephritis becomes in time the more threatening condition and may eventually prove fatal In their management these cases present many difficulties to the physician, an exceedingly nice adjustment of the diet being necessary to hold in check the two diseases Disappearance or marked diminution of the glycosuria upon withdrawal of starches from the diet is a favorable indication

Lastly the longer the glycosuria persists the more unfavorable is the progress

Auditorium Hotel

SERUM THERAPY IN TETANUS—WITH CLINICAL REPORT

BY T A DEWAR, M D

DETROIT MICH

August 2, I was asked to see a boy suffering with a sore neck and back, which his father regarded as being myalgic in nature On arriving at the bedside at 10 A M my attention was at first attracted to a sore foot protruding from beneath the bedclothes On inspection the wound proved to be an ugly laceration on the sole, over the base of the fifth metatarsal bone, which was carefully sealed up with court plaster, care being taken that none of the pus should escape I at once tore off the plaster and pushed my thumb deeply through the foul wound, preparatory to sterilization While scraping out the wound with my thumb the boy, to my surprise, suddenly assumed the position of opisthotonos, no part of the body touching the bed except his heels and the back of the head, the body being arched almost to the extent of a semicircle I recognized the clinical picture of tetanus tetanic spasms, spastic masseters with trismus, retraction of the head, the risus sardonicus, rigidity of the cervical, dorsal and lumbar muscles, with intense constitutional disturbance, pulse 135, respiration 21, temperature 100 degrees F

I at once stayed proceedings and took his history, which I present as follows H McD, male, age 11, family and personal history excellent July 24, patient stepped on some broken glass, receiving the lacerated wound described above No attention was paid to it, except to apply court plaster, and patient made no complaint and appeared as well as usual till July 31, when slight impairment of mastication and deglutition was noticed The following day he became progressively worse and complained repeatedly of intense stiffness of his neck and back, which in fact were in a spastic condition At this time mastication was impossible and deglutition very dangerous

The following day, the third day after the development of the spastic condition, I was consulted. Recognizing the gravity of the situation, I quickly summoned Dr. E. M. Houghton, and after making a confirmatory diagnosis and giving a decidedly unfavorable prognosis we agreed that in the matter of treatment our only hope lay in the use of tetanus antitoxin (antitetanic serum), combined with full doses of chloral, together with absolute isolation in a quiet, dark room, with only one attendant. At 11 A. M., the first injection of serum was made (10 c. cm.) under strict antiseptic precautions, it being necessary to give a whiff or two of chloroform to allay the spasm during the introduction of the needle. At this time pulse was 140, temperature 100 degrees. The slightest noise or touch threw the patient into violent spasms, teeth were set tightly, patient suffered extreme pain and absolutely refused all nourishment.

Patient was next seen at 5 P. M. Nurse reported nine spasms since last visit. Patient did not complain of pain, was willing and able to talk, and the effort did not excite spasm, said he was comfortable and suffering very little compared with his condition six hours previous. While we were present he took one ounce of milk which he swallowed with comparative ease. We were able to touch patient at this time without exciting spasm. Pulse was fuller, of the same frequency, temperature 98.4 degrees. Injected 10 c. cm. serum without using chloroform and without exciting spasm. It was noticed that perfect absorption of the first injection had taken place, leaving no soreness. Giving instructions to the nurse to allow milk freely, we left him in comparative comfort. Next seen at 11 P. M. Six spasms reported, indicating much less frequency. Patient asked for milk and drank a glass with ease, also asked for water, appeared inclined to take nourishment. He was asked to separate his jaws, which he did sufficiently to admit a lead pencil. Attendant first noticed the ability to separate the jaws about 7 P. M. Dr. C. T. McClintock, of the University of Michigan, accompanied us at this time and after careful deliberation expressed a hopeful prognosis. Patient appeared more cheerful. Pulse 140, temperature 98.4 degrees. Injected for the third time 10 c. cm. serum. Left patient at midnight, both physicians and friends very hopeful of results.

Just at this point our hopes were suddenly blasted by the adverse attitude of the patient's father to us. The father had spoken to another professional friend of his, a man with ancient methods. This physician disparaged our methods and that "stuff," the serum, to such an extent as to secure our immediate discharge, he promising to "pull the boy through all right." We offered to furnish serum gratis that our treatment might be continued, but it was declined. Under the new management treatment was commenced at 2 A. M. At 2.30 A. M. the patient instead of having from two to three spasms an hour, suddenly began having spasms at the rate of 200 per hour and ten hours later died.

In reviewing the above case one can not but be impressed with the favorable course the case was assuming. Among the most desirable and prominent results of the serum treatment we might mention the relaxation of the trismus eight hours after the inception of treatment, the reduction of the temperature (axillary) from 100 degrees to 98.4 degrees, the reduction in the frequency of the convulsions, the return of the patient to comparative comfort, his desire and ability to take nourishment, and above all the rapid increase in frequency of the convulsions from three per hour under the serum treatment, to 200 per hour a few minutes after our methods were supplanted by those of more ancient date, and the death of the patient ten hours after the older methods were commenced. Our experience with this case was short, but sufficient to warrant us in coming to the conclusion that the antitetanic serum exerted a powerful influence for good. While awaiting further statistics we wish to emphasize the importance of early treatment and strongly advocate the serum as a prophylactic in cases of suspicious looking wounds.

281 Meldrum Ave.

THE BACTERIOLOGIC CONTAMINATION AND THE PRESERVATION OF VACCINE LYMPH—GLYCERIN AS A BACTERICIDE

Read before the Chicago Pathological Society, Oct. 12, 1896.

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The present communication is the outcome of observations made during the past two years, at the request of vaccine propagators, regarding the best methods of preserving vaccine lymph. It is our purpose to refer briefly to the contaminations by bacteria occurring in bovine vaccine lymph with their effects and to the measures which have been found useful in preserving the virus. No reference will be made to humanized lymph, as the danger of syphilitic infection through its use has practically stopped its employment.

The bacterial contaminations may be divided into two classes. The saprophytes or non-pathogenic, and the parasites or disease producing. The former are of moment, because by their presence and growth the virus is decomposed and by some at least is robbed of its specific property. The pathogenic variety may cause various disease processes in the human subject when virus containing them is employed for vaccination.

Abundant observations have shown both of these varieties to be present almost constantly in the lymph dried upon ivory points, as well as in fluid lymph to which no preservative has been added. The cloudiness of such vaccine lymph after keeping a short time has been found to be due to the growth of saprophytic bacteria. Fütterer examined seventy-five ivory points from different sources and found the staphylococcus aureus in about fifty five, the staphylococcus albus in about the same number, and the streptococcus of erysipelas and phlegmonous inflammations in ten. The pyogenic staphylococci have been found frequently by other observers (Woitlow, Grigoriew, Straus, Copeman and Crookshank). The streptococcus has been found less frequently (Copeman, Woitlow). Reed examined vaccine points from six vaccine farms and found the staphylococcus albus and aureus in all the plates. We have made cultures from four different makes of ivory points which are sold in largest numbers in the Chicago market. They were obtained as fresh as possible in the original packages. In every instance they proved to contain large numbers of bacteria, and in those from each source the pyogenic staphylococci were found. Fluid lymph from a prominent firm was cloudy and contained innumerable bacteria.

The culture you see here was made from an ivory point purchased in the Chicago market recently. It was removed from the original package with sterile forceps, dropped into the liquefied nutrient agar-agar at 45 degrees C., and after standing a few moments the agar was poured into a sterile Petri dish. You see the large numbers of colonies of bacteria present.

The almost universal presence of pyogenic bacteria in virus furnishes a reasonable explanation of the common suppurative, phlegmonous and erysipelatous inflammations following vaccination. Whether other varieties of pathogenic bacteria are at times present in vaccine lymph is not certainly known. Abundant cases of tetanus following vaccination have been reported in medical literature. It is not difficult to imagine that the tetanus bacillus may gain entrance to the lymph where proper precautions are not taken in its collection, as it is so commonly found in the dust and refuse about stables. It is not known whether the tubercle bacillus can enter the lymph from a tubercular animal. E. Peiper refers to the report of Toussaine, in which he claims to have produced tuberculosis in a rabbit by inoculation with virus from a tubercular cow. Peiper vaccinated sixteen phthisical persons and could not find tubercle baccilli in the lymph after most careful search. Josef Acker concludes that no tubercle bacilli are found in the vaccine vesicles of tubercular individuals before or after the seventh day. It is hardly fair to conclude from these observations on human subjects that the same would hold good in the cow. However this may be, the danger from tubercle bacilli can be eliminated by using animals only after the absence of tuberculosis has been demonstrated by the use of tuberculin. We have not been able to find any cases recorded of infection with anthrax or glanders by vaccine lymph.

Knowing of the frequent presence of certain pathogenic bacteria in vaccine lymph, we naturally demand a preparation in which they are not found if we expect to have typical vaccinations and to avoid severe if not fatal sequelæ. Evidently it would be desirable to obtain sterile lymph, unmixed with any preservative or foreign material. To learn whether this was practical, we made inoculations on 5 per cent glycerin-agar-agar from the surface of vaccine sores of six cows on the fifth day, after they had been thoroughly cleansed by washing with soap and water, followed by solution of $HgCl_2$ and sterilized water. The inoculations were made by scraping the surface with a heavy platinum needle. From two cows, cultures of the staphylococcus aureus were obtained with an unidentified bacillus, from two a streptococcus corresponding in all its cultural properties to the streptococcus pyogenes, from one an unidentified bacillus, and one was sterile. All the sores were typical. These observations convinced us that it was useless to hope to obtain primarily sterile lymph, especially as the operators are not usually well skilled in antiseptic technique. Surgical wounds when managed according to the most careful antiseptic and aseptic principles have been found at the end of operations to contain a few bacteria. In a healthy wound these are destroyed by the wound secretion or tissue cells. In vaccine lymph, however, this is not the case, but a good nutrient material is furnished for their growth.

Various measures have been employed, at first empirically and later for scientific reasons, to preserve the activity of vaccine lymph. It was found by Carsten and Coert, in 1875, that sufficient heat to destroy the bacteria in lymph was also enough to destroy the vaccinal principle.

The method of Reissner was to obtain lymph, dry it over sulphuric acid and reduce it to a powder. The dry powder was found to preserve its properties up to twenty-nine days, and in later observations for a much longer time. The drying effectually prevented the growth of saprophytic bacteria, but did not injure the specific agent of vaccinia. This method became very popular and yielded good results.

Pissin pulverized the crusts and made a mixture with glycerin and salicylic acid water, which he stored in capillary tubes. This remained virulent as late as three weeks, as long as tested. Other observers have found it active for much longer periods.

Attempts have been made to preserve the lymph by adding various chemicals. R. Pott experimented with salicylic, boric and carbolic acids, and thymol. He concluded that after a time they injured the virus and did not in any way conserve the lymph.

The use of glycerin was placed upon a rational basis by the observations of Copeman, Chambon and Ménard and Straus. They found that the lymph diluted with glycerin at first contained more or less numerous bacteria of various kinds, but that the glycerin prevented their multiplication and in a few days lead to the death of most of them. Lymph from the same source to which no glycerin was added and which contained only the same proportion of bacteria primarily, in a few days was swarming with bacteria. With the growth of the bacteria the vaccinal properties of the lymph was destroyed. The addition of glycerin did not in any way lessen, but rather enhanced the activity of the virus. Chambon and Ménard found that while fresh lymph might produce bad results, if kept two weeks and later typical pustules were produced.

King obtained with lanolin similar results to those with glycerin.

We have repeated these examinations in a series of twelve samples of lymph. In each case lymph was obtained as soon as possible after being taken from the animal, with all precautions to prevent contamination. It was placed in capillary tubes, part in the pure state, part after being mixed with pure glycerin or equal parts of glycerin and distilled water. The pure lymph always contained a few bacteria in a few hours (three to six in a tube) and in from three to five days became cloudy and contained innumerable bacteria. In the lymph diluted with glycerin a few bacteria were also found at first, but as it was kept they became gradually fewer and disappeared in from eight to thirteen days. An exception occurred in one lot of lymph in which the bacillus subtilis was obtained in cultures after twenty-four days, but it did not increase in numbers. The glycerin lymph always remained perfectly clear and transparent as long as kept. Whether pure glycerin or equal parts of glycerin and water were used did not appear to alter the results. Virus from several of the lots was tested as to its vaccinal properties after it had become sterile up to as late as one month, with the result that it produced typical pustules. The percentage of glycerin did not appear to modify its effect.

There are here a series of cultures made from lymph taken Sept 18, 1896 The lymph was placed in capillary tubes, part in a pure state and part after diluting with glycerin We have made cultures from each at intervals, and you see the results Those from the pure lymph show a few colonies in the culture made thirty-six hours after the lymph was taken from the animal, and the colonies rapidly increase until on the seventh day they are innumerable The earlier cultures from the glycerin lymph also show a few colonies, but these become less in number in the later cultures, until on the fifth day none are found You will also note the difference in the appearance of the lymph in the two capillary tubes, the pure lymph has become cloudy, the glycerin lymph remains perfectly transparent

A series of experiments was also undertaken to determine the action of glycerin upon pure cultures of various bacteria The forty-eight hour growth upon agar-agar of the bacteria in question was introduced into test tubes containing sterile glycerin and equal parts of glycerin and water Control tubes containing a sterile solution of sodium chlorid were employed, the same cultures being introduced at the same time All the cultures of pathogenic bacteria were virulent At intervals inoculations were made from these upon nutrient agar-agar The effects of the pure glycerin and glycerin and water did not differ The staphylococcus aureus was dead in from five to twenty days Where the longer time was required a very large amount of culture was introduced into the glycerin The streptococcus pyogenes was dead in five days, even if introduced in considerable quantity The bacillus mallei was dead in two days There was little or no effect upon spores The subtilis bacillus grew for a month (as long as tested), and the anthrax bacillus was viable and virulent after five months

From these experiments we may conclude that glycerin has a distinct germicidal action upon many free bacteria, destroying most of those of a pathogenic nature likely to be found in vaccine lymph inside of two weeks, but having little or no effect upon spores Copeman, in 1893, states that he found that while some pathogenic organisms remain active in admixture of broth and glycerin, or even pure glycerin, for longer or shorter periods, other pathogenic and, so far as his experiments go, all saprophytic organisms, are killed out in from three or four days to as many weeks The practical application of these facts and observations are easy Until we know what the active agent of vaccinia is, and can obtain it in pure cultures, we must depend upon the cow for propagation of our virus If we can procure a virus which is free from bacteria, it is our duty to use it Such a virus is found in the glycerin lymph, and is being offered to the profession by many vaccine propagators One objection urged against it is that it is slow to dry, but the element of time is of no vital moment How much time is lost by persons going about with an arm in a sling for days? It would be as consistent to object to aseptic surgery from the same standpoint With a sterilized field of operation and a proper protective, dressing, secondary infection in the vaccine-wounds would be extremely rare

The ivory point, as at present prepared, should be discarded They can not be obtained free from bacteria The practice of supplying vaccine points to druggists to retail and handle with septic hands is especially pernicious

It is not our purpose to discuss the technique followed in vaccinating cows and in obtaining the serum It is sufficient to state that the lymph used to inoculate the cows should be preserved as if to be used for human vaccination, that the operating room should be cared for in the same way as one used for surgical purposes, and that the seat of inoculation, the hands of the operator, and all instruments and vessels used should be carefully rendered aseptic The vaccine sore should be made as nearly free from bacteria as possible before the lymph is collected, and the vessels in which the serum is received and the capillary tubes in which it is stored should be rendered sterile by heat We may briefly summarize as follows

1 Vaccine lymph in a fresh pure state almost always contains bacteria, and often pathogenic forms

2 Pure vaccine lymph after keeping in a fluid state, or dried upon ivory points as now prepared, is unfit for use and often dangerous

3 Vaccine lymph diluted with pure glycerin or equal parts of glycerin and distilled water, becomes sterile in about two weeks, and should not be used sooner

4 All animals used for propagating vaccine lymph should be tested with tuberculin before being used

5 All vaccine establishments should be regularly inspected by properly qualified officials, and samples of virus from each lot of vaccine examined bacteriologically by a competent person and the result certified before it is placed upon the market

6 Each package of vaccine lymph should be so marked that the date on which it is taken, and, if fluid, what has been added to it, shall be shown

In conclusion, I desire to express my thanks to Prof Walter S Haines for valuable suggestions and to Dr E M Wood for kindly furnishing material for carrying out part of these experiments

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SOCIETY PROCEEDINGS

Chicago Academy of Medicine

Regular meeting Nov 13, 1896

(*Concluded from page 1297*)

Dr E T **Dickerman**, continuing the discussion, said

In regard to the treatment of empyema of the frontal sinus and also of the ethmoidal cells, there is only one treatment wherever there is pus, and that is to evacuate the pus and establish drainage How can this be done in these cavities? For the frontal and ethmoidal cells there is practically but one method, namely, the internal, removing the anterior third of the middle turbinated body Sometimes you will find along the processus uncinatus a thickening which will have to be curetted away By so doing you will establish free drainage You can not expect in these cases to effect a cure in two weeks or three months In some instances it takes a long period of time to bring about a cure, and this will depend largely upon the perseverance not only of yourself but of the patient also It requires thorough cleansing on part of the patient and thorough irrigation of the cavities by yourself, together with the removal at any time of granulation tissue which is continually springing up wherever you have pus running over a mucous surface If your treatment is thoroughly carried out, undoubtedly your cases will get well The recoveries are not only brilliant from your standpoint, but they are eminently satisfactory to the patient

In regard to the effect of this disease, we have symptoms of pain which is referred to the trigeminus It may be local, or may be projected to any part of the head We also have the constant presence of secretions or of pus, there may be occlusion of the naris There is another important symptom, and that is, during sleep there may be a purulent or muco purulent discharge which is continually flowing backward The patient at night unconsciously swallows this and then we get not only toxemia from absorption of the pus, but we establish in the gastro intestinal tract of the patient a catarrhal condition which is manifested by various digestive disturbances A certain amount of this purulent matter is deposited on the posterior pharyngeal wall, which very often brings on vomiting These patients lose flesh very rapidly, but under treatment and the thorough cleansing of the parts and getting rid of the discharge, I have seen them gain as much as twenty pounds in a month This is a subject upon which I feel very strongly, and is one that should always be considered in all cases of indigestion in which there is vomiting in the morning After the discharge has stopped, the patient will make a good recovery

A few words in regard to the treatment of the antrum and I have done Opening through the alveolar process has never proved satisfactory with me, only in those cases that we might call subacute, in which the patient has either lost a tooth or the infection has been through the mouth, or the disease has followed some acute exanthematous affection, pneumonia, or something of that sort, then opening through the mouth with thorough washing two or three times and allowing it to heal, you get a complete recovery

There is another way to treat these cases which is equally as satisfactory It is not by the method of Krause but a method recently devised by an American, Dr Walter Freeman, of Philadelphia It is a method which to me seems most rational There is very little inconvenience to the patient in resorting to it Dr Freeman enters the antrum through the inferior meatus anteriorly with a drill, then introduces a trocar and canula which is allowed to remain, followed by a thorough irrigation This treatment is not irritating to the patient as a rule, and he is able to wear the canula easily In the method of Krause the introduction of the trocar causes considerable pain and discomfort to the patient, while with Freeman s treatment I think the majority of cases will do equally as well and not be inconvenienced nearly as much

Dr **William L Ballenger**—I shall not speak of the infectious diseases which cause disturbance in the accessory sinuses, except one that has not been mentioned I refer to ozena My observation has led me to believe that some of the cases of obstinate ozena are not cured, for the reason that we do not enter the accessory cavities and thoroughly rid them of the bacillus of ozena Ozena is undoubtedly due to a bacillus, and it is a cause of disease of the accessory cavities This being the case, our method of treatment must in some cases extend to the accessory cavities, or else we will fail in getting the proper results I have been making some investigations along this line and hope at some future time to make a report on this subject Exploring the antrum with a curved syringe point is certainly preferable to making an exploratory puncture through the alveolar process I find it is very essential to treat the acute cases for fear that they may become chronic as they do in many instances I do not agree with Dr Gradle where he said that it was probably not best to attempt any treatment in the acute cases As has been said by Dr Dickerman the natural openings of the accessory cavities are closed by swellings or hypertrophy of the middle turbinated body or by hypertrophy of the tissues thereabout This hypertrophic process continues simply because the openings are occluded By using some simple remedies, such as aromatic and astringent washes, cocain, antipyrin, etc, we can render these cavities patulous and thereby establish aeration and drainage, a cure will oft times follow as a result I think that it is very essential that we should resort to some simple method of treatment in the acute cases In catarrh of the frontal sinus we may have a persistent headache which is sometimes immediately relieved by washing out the nasal cavity thoroughly, applying cocain, and antipyrin to maintain the effect of the cocain longer, and then by inflations of chloroform vapor with a Politzer bag, we enter the cavity at once and relieve the patient of a very distressing headache

I must protest against non interference in the acute cases The main part of the paper I agree with and heartily endorse

Dr W L **Baum**—I would mention one affection which I believe is frequently associated with disease of these sinuses, and in so doing I would ask Dr Gradle in closing to answer the question as to whether erysipelatous conditions are not intimately related to sinus disease Within the last two years I have frequently noted the fact that in recurrent erysipelatous conditions of the face particularly where the infection seems to arise from the neighborhood of the nose, that patients have been subsequently operated upon for diseases of the sinuses, not of course, during the erysipelas attack and the operation resulted in a cure of the erysipelatous infection This is a subject of great interest, not only to rhinologists, but also to the general practitioner, because all of us see more or less frequently cases of recurrent erysipelatous infection I do not believe we have an erysipelatous condition which is idiopathic and if we look for it we will find pus in every case I have seen a number of cases of this kind in the Cook County Hospital complicated by disease of the frontal sinus because the patients complained of long and persistent headache, the headache becoming more aggravated at the beginning of the erysipelatous infection

Dr E S **Talbot**—A few thoughts have come to me that have not been touched upon by any of the speakers In the preparation of the chapter of my book[1] on the subject of deformities of the nose and antrum, about 11,000 skulls were examined, 3,000 of which were broken sufficiently so that I could examine the antrum, making about 6,000 antra altogether, taking both sides I do not understand how a person can intelligently treat disease of this cavity without first knowing something about its anatomy You would be surprised to see how few of these cavities are uniform in their development Gray speaks of the cavity as being a triangular cavity, its apex directed outward, its base the outer wall of the nose I venture to say that less than one third of these antra possessed that shape Some of them were very small, much smaller than the average antra mentioned by Gray One of these antra may be divided into a number of cells, and you can see how absurd it would be to examine an antrum of that kind with a light, because of the fact of its being filled up with bony cells Sometimes these little cells are located below the orbit and the lower part of the antrum is entirely filled up In a larger number of cases there were one or two, or possibly three septa, dividing the antrum in three or four parts In some cases the floor of the nose would be found extending over the alveolar process I have seen them frequently extending half way and again across the alveolar process In these cases the antrum would be small in size

In the last ten years I have had two patients come to me who have had openings drilled from the palatine root of the first molar tooth into the floor of the nose I thought that the person who operated upon these jaws must have had a poor knowledge of the anatomy of the parts When I came to examine skulls and saw how many of those were deformed and the floor of the nose extended over the alveolar process, I could readily see how any man by making an opening through the palatine root of the first molar tooth would penetrate the floor of the nose In examining these 6,000 antra I found the lowest point was invariably situated between the root of the second bicuspid and the first permanent molar, that this cavity extended forward and upward Therefore, the proper place, according to the examinations made would be just midway between the root of the second bicuspid and the first permanent molar on the outer side of the alveolar process Dr M H Fletcher, of Cincinnati, in 1893, after examining 1,000 antra, arrived at the same conclusion I do not see how it is possible for a man to treat the antrum by making an opening through the middle meatus of the nose You would strike the antrum about midway, and therefore you do not get the lowest point for drainage

I was pleased with the remarks of the essayist in regard to the etiology Many dentists and some physicians are of opinion that antrum troubles are in most cases due to abscessed molar teeth Dr Fletcher and myself are not of that opinion, but agree with the essayist that most troubles are due to infection through the opening in the nose Dr Fletcher says "In 1,000 antra I find 252 upper molars abscessed, making 25 per cent of antra which have abscesses in this locality for every fourth antrum This per cent is probably smaller than it should be, since many teeth were lost and the alveolar process absorbed away, and undoubtedly some of these lost teeth have been abscessed Out of the 252 possible cases perforation into the antrum was found only twelve times, thus showing over 4½ per cent or about one in every twenty one of the abscessed teeth in this locality which are connected with the antrum" In the treatment of 367 cases of pulpless molar teeth I found only 3 per cent of diseased antrum Dr Fletcher found in 224 cases of pulpless molar teeth treated by him only one case of pus in the antrum Dr Bonwill, in a practice of forty years, has only had two or three cases of pus in the antrum It will be observed then that the teeth rarely cause antral disease

In the treatment of the antrum I should never think of flushing or draining it without having the patient lie with the head down in order that the fluid might be carried over the septa and out of the opening at the lowest point in the floor of the cavity This should be done in all cases, since we are unable to define the shape of the cavity in living subjects

Dr **Henry Gradle** (closing)—I stated in the beginning that my paper was not by any means formal or dogmatic, but rather a rambling discussion of personal experience Perhaps that accounts for the manner in which I have been misunderstood in reference to some points I did not say that there should be no interference in acute cases I only said as a rule, I would not favor surgical interference First of all, in treating such patients they are generally too sick with some other disease to stand much manipulation Many of the cases are self limited On the other hand, I have favored the use of douches, provided due care be exercised in guarding against danger to the ear Furthermore, in all of those cases where pain exists and can not be controlled by antipyrin, which is generally sufficient, I should favor a temporary opening into the antrum or an attempt to syringe through one of the natural openings When it comes to the ethmoidal or frontal cavities, syringing through the natural opening is difficult, and I can not succeed in doing it in 50 per cent of the cases, as has been mentioned by Dr Dickerman Engelman tried it on cadavers after making a counter opening, and found that the frontal and maxillary sinuses can be irrigated only in a small percentage of cases The question of ethmoidal diseases I barely touched upon It is a noteworthy fact, however, that Fraenkel found not a single instance of ethmoidal disease, although he examined the ethmoid in every case Zuckerkandl and others also speak of ethmoiditis as not being very frequent Cases of necrosis of the ethmoid bone have been reported, but are not very common I remember within the past year to have had a case in which I felt sure there was necrosis in the anterior cells It seemed so with a probe There was certainly suppuration from the cells But on examining the middle concha after amputation I found no evidence of bone disease Examination with the probe is not absolutely trustworthy as a guide in disease of the ethmoid cells

The importance of attention to the infundibulum I can endorse It requires the closest attention to this region to remove all polypi and granulation tissue, to irrigate with fine tubes, not necessarily with the intention of reaching into the sinus, but simply to clean the region between middle turbinal and the external nasal wall I have been misunderstood about my operations on the maxillary sinus It seems there is as much discrepancy among the members of the Academy as to results and methods of operating in these cases as can be found in the published literature Ziem has had over a thousand cases, and he says there are very few cases that do not get well if you open through the alveolar process and irrigate Jansen of Berlin, on the other hand, never saw a single cure of maxillary empyema by any method until he resected the front wall of the antrum, and then it took from one to two years before the patients got well There are cases which do not get well with any method of treatment, except in the course of years, after extensive resection of the anterior wall of the maxillary sinus Other cases get well in six weeks to three months, after irrigating through the alveolar process I would not condemn this method simply because it fails in some instances Any method will fail in some cases Formerly I had a prejudice against the operation from the mouth In operating through the canine fossa my results were not as good as now Sometimes at the anterior wall of the canine fossa, at its thinnest point, you can penetrate with a needle In other patients the wall is thick There is no natural drainage through the antrum, because pus is too thick to flow I have made openings large enough to insert the small finger through the canine fossa, and still when I irrigated I would find pus after a few hours It would not flow out You can draw it out by means of gauze packing, and the patient feels very well while the packing is there You can make him feel comfortable by applying the packing once in four or five days, but without extensive resection of the anterior wall gauze packing will rarely lead to a permanent cure

Chicago Pathological Society

Regular Meeting, October 12, 1896

(Concluded from page 1299)

Dr **James B Herrick** read a paper on

TRICUSPID STENOSIS,

Reporting two cases and exhibiting a specimen from the second case

Case 1—A woman, 26 years of age, with no symptoms indicating heart disease during infancy or childhood, first noticed swelling of the feet, shortness of breath, palpitation, cough, two months after giving birth to a healthy child, and seven months before admission to the Cook County Hospital The physical examination revealed an enlarged right and left heart, a presystolic thrill over the apex, accentuated pulmonic tone, systolic apical murmur, systolic murmur over xiphoid, small, weak pulse Died in one week

Clinical diagnosis Mitral stenosis and regurgitation, relative tricuspid insufficiency Autopsy showed a heart hypertrophied and dilated in all its cavities Mitral stenosis, the opening admitting one finger tip Tricuspid stenosis, opening admitting two finger tips No defect of the ventricular or auricular septa

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[1] Osseous Deformities of the Head Face Jaws and Teeth

Case 2—Female, aged 24, bookbinder, rheumatism at 18, two years later a diagnosis of heart disease by physician Four days before admission to County Hospital gave up work on account of weakness and shortness of breath Death in one week

Clinical diagnosis Difficult on account of feeble action of heart Autopsy revealed greatly hypertrophied heart, all the chambers enlarged Muscular structure of the right auricle in particular shows extreme hypertrophy No defects in the septa Mitral valve admits one finger tip, tricuspid admits one and one half finger tips

In commenting upon these cases the essayist referred to the extreme rarity of tricuspid stenosis Following Leudet he made two classes, the congenital and the acquired The two cases reported evidently fell into the latter class because of 1, the absence in infancy and childhood of symptoms of cyanosis, 2, the history in the one case of childbirth, in the other of rheumatism with subsequent development of cardiac symptoms, 3, the complete closure of the inter ventricular and inter auricular septa The cases resembled the majority of cases of tricuspid stenosis in being found in women and in being associated with diseases of the valves of the left heart In Leudet's series of 114 cases, with autopsy, only 11 showed tricuspid disease alone The symptomatology and diagnosis of the affection were also discussed The study of Case 2, where there was the enormous hypertrophy of the muscular tissue of the right auricle, showed that even the auricle could in a measure compensate for the obstruction at the auriculo ventricular valve This helps to explain why the prognosis is not so uniformly bad as one would think, and how it is possible for patients to live even to old age, one of Leudet's cases reaching the age of 64

DISCUSSION

Dr Joseph M Patton—The interesting case reported by Dr Herrick is certainly of sufficient moment not to be passed by in silence The rarity of the lesion itself makes it of great interest The difficulty of diagnosis adds to the interest as does the uniformity with which tricuspid stenosis is associated with mitral stenosis, and this is admitted by nearly every author A great many authors say, among them Hayden, that tricuspid stenosis rarely or never occurs except in association with mitral stenosis Today this is not regarded as a fact, because in the last few years a number of cases have been observed where the postmortem proved that tricuspid stenosis does occur alone A good many of the text book authors tell us that the murmur of tricuspid stenosis will be a presystolic murmur I think that is based in part on theory, simply because of the presystolic mitral stenotic sound The fact is that the murmur of tricuspid stenosis is at times not presystolic, it may be, but it is at times a diastolic murmur It is very difficult to place the time exactly of a tricuspid stenotic sound I have only heard one such murmur where a postmortem of the patient was obtained and that murmur was diastolic, or, at least, that portion of it which might be called presystolic was so covered by the associated sounds that it was impossible to demonstrate it clinically as a presystolic murmur Hayden points out that, on account of the association of tricuspid stenosis with mitral stenosis, a strong diagnostic point may be made of two presystolic murmurs that are heard, one being heard in the mitral area, and the other in the region of the xiphoid, and between these two an open area in which no sound can be heard That appears to be also largely theoretical, because the area of transmission is usually not so definitely limited as to give us such an open area It seems to me, that from the history of the first case recited the clinical diagnosis might have been modified, from the fact of there being so much dullness transmitted far to the left, and so high, in connection with an apex beat within the fifth space Such an area of dullness would tend to exclude aortic disease as a factor in the production of the cardiac condition The specimen is a particularly beautiful one in that it shows well marked and uniform stenosis of tricuspid and mitral openings, and also in the unusual degree of hypertrophy of auricular wall and of the musculi pectinati

Dr R H Babcock—Dr Herrick has covered the field so fully and admirably in his discussion of this subject, that it seems difficult to say anything which would not be a mere repetition of what has already been said, yet it seems to me, that something more might be added with reference to the prognosis in these cases It is a matter of very great interest and astonishment that a case of tricuspid stenosis could live to the age of 64 years, and it would be instructive if we could know some of the attendant circumstances pertaining to that patient's life, as well as of some of the associated conditions within the heart I would ask Dr Herrick to tell us in that particular instance what other lesions, if any, were associated with the tricuspid stenosis

Dr Herrick—I could not tell without referring to Leudet's thesis

Dr Babcock—I am interested in this because Bacelli gave an elaborate paper in 1894 on "The Prognosis of Cardiac Lesions," which were of a similar nature He made the statement that where stenosis of two separate orifices existed, or where insufficiency of two separate sets of valves existed, as, for instance, insufficiency of the aortic valves and insufficiency of the mitral valves, the prognosis, other things being equal, was better than where there was a combination of stenosis and insufficiency, as, stenosis of the aortic orifice and insufficiency of the mitral valves It would be interesting to know whether in this case there was such a condition as stenosis of the pulmonary orifice and stenosis of the tricuspid orifice Furthermore, the conditions of the patient's life must intimately affect the prognosis Under normal conditions the right ventricle is relatively as adequate to its work as the left, yet in any disease which affects the right side of the heart it is much more likely to break down in its compensation than the left If tricuspid stenosis exists in a congenital case, or if tricuspid stenosis and pulmonary stenosis should concur, the prognosis would be affected not only by these respective conditions but by the circumstances of the patient's life as to daily exercise, physical exertion, etc If the patient led a particularly quiet life, one not calculated to send the venous blood too rapidly to the heart, the heart might adjust itself to the condition of stenosis and the backward stasis in the other viscera, as the abdominal, would not be so great as to materially affect life Yet even under the most favorable circumstances it would seem as if the condition were one likely to render long life impossible through the general nutrition, brought about by the condition of the chylopoietic viscera

The diagnosis is so difficult that, it seems to me, anyone would be exonerated from all reproach who was unable to make a diagnosis When, however such is made the practical interest consists in the prognosis and treatment Let us take, for instance, the case which the doctor has reported and exhibited the specimen from tonight The patient was a bookbinder, an occupation which if not laborious and not very difficult, yet required the very kind of exercise (arm movement) which would favor a too rapid flow of venous blood to the right auricle and produce disastrous results in the way I have pointed out

Dr John A Robison—Personally, I desire to thank Dr Herrick for calling our attention to the fact that cases of disease of the right side of the heart are perhaps more frequent than we have been led formerly to believe I think statistics will show that there have been placed on record about one hundred and thirty cases of tricuspid insufficiency Dr Herrick's records, I believe, include cases in which there have been found about one hundred and nineteen or one hundred and twenty cases of tricuspid stenosis, would it not?

Dr Herrick—Yes There are about one hundred and thirty cases of this class now on record

Dr Robison—The recital of one of Dr Herrick's cases brings to my mind a case which I had a few years ago in which the result was appalling, and in which I was somewhat at a loss to account for the rapid onset of the symptoms An Englishwoman, 30 years of age, became pregnant At about the sixth month of her pregnancy she developed alarming symptoms of valvular disease of the heart There was a loud systolic murmur heard at the apex The heart was considerably enlarged on both sides then dropsy came on suddenly, disappeared, and she then had all the signs of rapid failure of the heart Fortunately a miscarriage took place and she lived through it As time went on a second pregnancy occurred At about nearly the same period of pregnancy the same symptoms again manifested themselves, and the result this time was not the same as on the previous occasion The symptoms became rapidly worse and the woman died If we had been positive in regard to our diagnosis that it was not simply a case of mitral regurgitation, but perhaps one of tricuspid regurgitation as well, it is possible we might have advised that woman to avoid, if possible, the possibility of a second pregnancy, and her life might have been prolonged a considerable number of years If we made diagnosis of disease of the right side of the heart more frequently than we do, we could prolong the lives of the unhappy victims

Dr A M. Corwin—In regard to the diagnosis of these cases, at first sight it seems strange that we have not more certain data, yet as Dr Herrick has said, cases of tricuspid stenosis are usually complicated with other lesions We have several murmurs [illegible] infreque [illegible] t murmur, dias tolic in time, and this is often heard most distinctly in the area in which we would expect to hear the presystolic murmur of tricuspid stenosis This may be one of the reasons why an accurate diagnosis has seldom been made in these cases of tricuspid stenosis We know from experience that where the heart beats over 90, and two murmurs occur, both diastolic, one in the first part of diastole, as is the case with the murmur of aortic regurgitation, and the other in the latter part of diastole—presystolic, it is not always an easy matter to make out their specific character

With regard to the area of intensity of this murmur of tricuspid stenosis, over the lower part of the sternum, it suggests the question why we hear so frequently the murmur of aortic regurgitation loudest in this same area Some authors, like Loomis, say that it is due to transmission down the sternum The sternum undoubtedly transmits to its lower end loud sounds produced at its upper extremity I think, however, those who have had much experience in examining the heart, know that while in many of these cases the diastolic murmur of aortic regurgitation is heard loudest at the lower part of the sternum, it may be in such instances heard with very little intensity at the upper or middle part of the sternum In not a few instances, I have noticed that it is not only heard at the root of the appendix sterni, but along the costal arch for an inch and a half to the left This I have explained with most satisfaction by the theory of its propagation along the diaphragm As the murmur is produced in diastole the left ventricle is in close contact with the diaphragm at that time, and the murmur is therefore transmitted down to and along this to its attachment at the end of the sternum The left heart being also enlarged in such cases, we can readily see why the transmission should take place in this manner I have dwelt upon this point tonight because the murmur of tricuspid stenosis in question occurs in diastole and has its seat in the same region over the lower end of the sternum

Dr James B Herrick—I will merely say a word or two in closing with regard to the prognosis Leudet, whose name I have used frequently tonight, makes the statement that it is only by the complexus of symptoms and by the careful study of the entire condition of the patient that one can make the prognosis in these cases And it seems to me also, that a study of this specimen, where we observe great hypertrophy of the auricle, will show how it is possible for some of these patients to live as long as they do The statement is made by some writer with regard to this lesion, that auricular compensation is practically *nil* But if we look at this postmortem specimen with the greatly hypertrophied auricular structure we can realize how there can be good auricular compensation

With regard to the length of life in cardiac disease, particularly with the two lesions of insufficiency, or the two of stenosis, I recall that a few years ago I was called to see a patient, the father of a physician, and his history leading me to suspect cardiac disease, I started to place my ear to his chest, when he said, "Doctor, I have heart disease Skoda told me so in Vienna thirty five years ago" At the time I made the examination he was about 67 years old, and had been told thirty five years previously by Skoda that his heart was diseased The lesion, as I remember, was mitral regurgitation with aortic regurgitation, bearing out the statement of Bacelli which was referred to by Dr Babcock

(*To be continued*)

SELECTIONS

The Medical Profession Under the Roman Empire —A writer in the *Practitioner* has sketched some interesting views of medical practice in later Rome from Dr R Briau's "Archiatrie Romaine" and Dr Vercutre's learned article, "La Médecine Publique dans l'Antiquite Grecque," published in the *Revue Archéologique*

"Under Alexander Severus, and especially under Diocletian, physicians who had the good luck to bask in the sunshine of the Imperial favor could hope for almost any dignity and for any privilege The Court physicians and their children were exempt from all taxes and public duties, they were placed in the highest ranks of Diocletian's hierarchy—among the Egregii, the Spectabiles, the Illustres, the Eminentissimi The baronetcies and knighthoods half contemptuously flung to one or two members of the profession nowadays show poor indeed beside these titles and dignities The highest offices in the state were not beyond the reach of the lucky doctor Vindicianus, a medical practitioner, was Proconsul of Africa, and another member of the profession, Ausonious, father of the poet, was Prefect of Illyria Nor were these isolated instances of the height to which medical men in those days might climb by Imperial favor As regards public appointments held by medical practitioners, it is not till the time of the Empire that we find evidence of their being in the direct employment of the state as regular officials, with a definite place in the hierarchy of civil and military administration

"Under Augustus there were medical officers to the circus, the amphitheater, the training school for gladiators, the public libraries, the Imperial Estate, the public gardens, etc Both the army and the navy had regular medical services, the surgeons had a good position immediately after the senior officers Their titles were—in the army *medicus militum*, *medicus cohortis*, *medicus castrensis*, and in the navy, *medicus ex triremi*, etc

"In the provinces each town of any importance had several medical functionaries, who seem to have combined the duties of Poor Law medical officers and medical officers of health They were paid out of a local rate to look after such of the inhabitants as needed their services, and generally to give advice as to sanitation This was an old institution borrowed from the Greeks, but, though officially recognized, and even administered under state control, as far as the funds were concerned, in the provinces, it was not introduced into Rome itself till A D 368 In that year the Prefect Prætextatus issued a decree (*De Archiatris popularibus Urbis Romæ*) enacting that each of the fourteen districts of the city should have an *archiater* or chief medical officer These officers are enjoined "honorably to tend the lesser folk rather than shamefully serve the rich" (*honeste obsequi tenuioribus malint quam turpiter servire divitibus*) They were allowed to accept the offerings of those in good health for services rendered, but not such as were promised for cure by persons in danger of death On the death or resignation of one of these officers his successor was to be chosen, not by the favor of the great, nor by the legal authority, but by the votes of the other *archiatri populares* It is hardly necessary to add, however, that the head of a despotic government could not long allow the right of election to any public appointment with a salary attached to it, to be independent of his control Accordingly we soon find the Emperor interfering with the appointment of *archiatri*, and we find the refusal of the officers to recognize the appointment of a colleague by Imperial authority described as 'a kind of sacrilege" By and by we hear of a *Præsul archiatrorum* placed over the others, and charged with the supervision of their official conduct

"It is hardly necessary to add, however, that the head of the despotic government could not long allow the right of election to any public appointment, with a salary attached to it, to be independent of his control Accordingly we soon find the Emperor interfering with the appointment of a colleague by Imperial authority described as a kind of sacrilege By and by we hear of a Præsul archiatrorum placed over the others, and charged with the supervision of their official conduct

"These old Roman practitioners knew little anatomy or physiology, and nothing of microbes, yet, no doubt, they were useful members of society The superior scientific person of today looks on the past with a feeling of Pharisaic self glorification, and the gibes of the Roman satirists might be taken to show that the medical practitioners of ancient Rome were not only impostors and quacks, but villains and profligates of the worst kind It is impossible to receive this as a true picture of the whole profession The evidence of witnesses like Cicero, Horace, and others—men of the world not likely to be imposed upon by ignorance or pretension—has already been cited Another illustrious witness in favor of the doctors of Seneca, who, after a glowing description of the devoted care which a good physician gives to his patient, says, 'Such an one is not merely a doctor, but a friend Although I may pay his fees, I shall always remain his debtor, the debt of the heart remains undischarged,' *pretium operæ solvitur, animi debetur* Evidently there were physicians worthy of the name, as well as grateful patients, in those days "

Etiology of Infectious Diseases —After discussing at some length the etiology of infectious diseases Surgeon General Sternberg says in the *American Journal of the Medical Sciences* for December, 1896, that it is surprising that any well informed physician should entertain the vague and unscientific notions with reference to the epidemic prevalence of influenza which formerly passed current in attempts to explain epidemics of cholera, typhoid fever, typhus, etc , but in regard to the malarial parasite he considers it to be well established that it may be carried by currents of air to a considerable distance and gain access to the blood by way of the respiratory passages, but when applied to cholera or influenza it receives no support from facts or physical laws, for the epidemic may occur in a direction opposite to prevailing winds This brings us to speak of a classification based upon the mode or channel of infection From this point we may have *a*, traumatic infections, *b*, infection by contact (direct contagion), *c*, infection through ingesta, *d*, infection through the respiratory tract Under the heading "infection by contact," *b*, we should have to include venereal diseases and contagious skin diseases Another method of classification which presents certain advantages is one based upon the nature of the infectious agent This would give us the following principal groups

I Diseases due to infection by vegetable parasites *a*, schizomycetes (bacteria), *b*, hyphomycetes (microscopic fungi), *c*, blastomycetes (yeasts)

II Diseases due to infection by animal parasites *a*, protozoa, *b*, nematodes, *c*, trematodes, d, cestodes, *e*, acari

Finally, we may base our classification upon the special tissues or organs involved in the infectious process From this point of view we have

I General blood infections (septicemia), including malarial infection, relapsing fever, streptococcus infection, etc , in man, and anthrax, swine plague, cattle plague (rinderpest), Texas fever of cattle, etc , in the domestic animals

II Localized infections *a*, of the integument and subcutaneous connective tissue, including scabies, the dermatophyti, erysipelas, furuncles, etc , *b*, of mucous membranes, including diphtheria, influenza, glanders, bronchitis, rhinitis, conjunctivitis, otitis, gonorrhea, cystitis, enteritis (?), cholera Asiatica, cholera nostras, etc , *c*, of serous membranes, including pleuritis, pericarditis, peritonitis, meningitis and synovitis, *d*, of glands, including typhoid fever, bubonic plague, parotitis, mastitis adenitis, etc , *e*, of the lungs, including pulmonary tuberculosis, croupous pneumonia, etc It is evident that under several of the subdivisions the diseases mentioned would require a subheading to designate definitely the nature of the infectious process Thus we would have, for example, to specify whether a peritonitis was tubercular or due to streptococcus infection or to some other known microorganism, an adenitis might be due to syphilitic or tubercular infection, or to one of the pus cocci, a conjunctivitis to gonococcus infection or to some other pathogenic microörganism, etc It will be noted that, both in our classification on the nature of the infectious agent and in that based upon the special tissues or organs involved in the infectious process, we have not included the eruptive fevers It is hardly necessary to say that this omission is due to the fact that as yet we have no positive knowledge to guide us in placing these infectio diseases in the classifications suggested, which r ecessarily incomplete

PRACTICAL NOTES

Permanent Success of Two New Methods of Treating Hernia —The five children cured of congenital inguinal hernia by Prof Lannelongue last July with local injections of one tenth solution of chlorid of zinc (about 30 drops in all), as mentioned in this JOURNAL at the time, page 270, were exhibited at the French Surgical Congress in October, and the permanent success of the treatment announced There have been no relapses, and coughing produces no disturbance The inguinal ring is entirely obliterated, with an indurated plastron continuous with the pubis Notwithstanding the existence of this fibrous plastron, the elements of the cord and testes have remained normal Poullet of Lyons also extolled the fine results obtained with his simple and effective autoplastic tendon method with which he cured over 83 cases last year He obliterates the external ring by sewing it up without any ligature, catgut or silk, but with a piece of the patient's own fibrous tissue, still attached at the other end, which soon adapts itself to its new position and continues to grow as before He first makes an incision over the ring, parallel to Poupart s ligament, 4 cm in length, divides the stricture and separates the hernia from the cord A wire thread is then passed through the stricture four or five times and the ends brought outside, through all the strata of the abdominal walls, thus separating the peritoneal cavity entirely from the field of operation He enters through the external ring, which he never incises, consequently the operation is necessarily extra abdominal and absolutely benign The next step is an incision where the right anterior muscle of the thigh crosses over, 15 cm from the anterior superior iliac spine A ribbon of fiber, 1 cm wide, is then detached from the inner surface of the tendon Flexing the limb to relax the muscle, brings this tendon into prominence, and it is cut at the middle of the thigh The finger insinuated under the sartorius creates an intercellular passage, and with a long pair of forceps, the tendon is drawn through it into the inguinal wound With this tendon now the hernia is obliterated With a large needle it is passed through the anterior wall of the canal, 2 centimeters outside of the external pillar, and then brought around the internal pillar of the internal ring The 4 or 5 centimeters left are then run into a muscle, where they become ingrafted in a few days The end is fastened with two fine wire stitches brought through to the skin and removed in a week The results of the operation are very simple, the union by first intention taking place within eight days In a few exceptional cases a serous discharge occurred for a little while, showing that part of the tendon had become necrosed, and had not grown in perfectly, but this did not interfere with the ultimate cure of the hernia —*Bulletin Méd*, October 25

The Best Treatment of Scabies —Jullien describes in a recent article his surprise a few years ago when on a visit to Italy he saw in the consulting rooms patients stripped naked and being painted by the attendants with a brownish fluid from head to foot He was informed that this method of treating scabies by painting the body with Peruvian balsam without friction, was the most effective Since then he has adopted it in his own practice, and recommends it in high terms as simple and inexpensive, while much more effective than *sulphur treatment*, etc He speaks with an experience of 300 hospital cases, besides those in his private practice The odor is agreeable, and it kills the acarus and its eggs very rapidly No preparation is necessary, the grease of the skin facilitating the action of the remedy It is applied with a brush and gently rubbed over the entire surface of the body At night is the best time, and a

in the morning or adds that he considers

cated" in tensive pyoderma,

oils, eczema, debility

ca regnancy, for

women in the menstrual period, and for every one who is unable to take baths for any reason, especially for infants with such delicate skins that any friction is followed by dermatitis or strophulus It never causes any inconvenience, even when used for a long while —*Province Med* November 21

Artificial Serum —The *Gazette Méd de Liège* of November 26, gives various formulas for artificial serum as follows Surgical serum to use in post operative peritoneal septicemia, in collapse, puerperal eclampsia, in severe typhus and uremia, in cholera and in infective diseases Chlorid of sodium 7 50 *grams*, sterilized aqua dest q s ad 1,000 Hayem's formula is Sterilized water 1 liter, sodium sulphate 10 gr , sodium chlorid 5 gr (50 to 100 c c) Luton's formula Sodium sulphate 10 gr , crystallized sodium phosphate 5 gr , aqua dest 100 c c (5 to 25 c c) Cantani Sodium chlorid 4 gr , sodium carbonate 3 gr , aq dest 1,000 gr (30 to 40 c c) Samuel Sodium chlorid 6 gr , sodium carbonate 3 gr , aq dest 1,000 gr (From 2 to 500 c c) Schiess Sodium chlorid 0 75 gr , aq dest 1,000 gr , sodium bicarbonate 0 50 gr (For collapse in pneumonia, 10 c c) Vignesi Sodium chlorid 50 gr , water 100 gr (20 to 30 c c in grave anemia) Cheron Sodium sulphate 8 gr , sodium phosphate 4 gr , sodium chlorid 2 gr , phenic acid in flakes 1 gr , sterilized water 100 gr (5 to 10 c c every other day) Huchard Ster water 150 gr , phosphate 10 gr , sodium sulphate 2 50 gr , sodium chlorid 5 gr phenic acid in flakes 1 50 gr (5 to 10 c c) De Renzi Aq dest 1,000 gr , pure iodin 1 gr , potass iodid 3 gr sodium chlorid 6 *gr* (200 *to* 300 *c c in pulmonary tuberculosis*)

Beta naphthol Inhibitory of Intestinal Fermentation —Dr David D Stewart of Philadelphia in the *Polyclinic*, takes up the subject of the treatment of cases wherein there is an excessive excretion of hydrochloric acid He holds the opinion that it is very important for the relief of intestinal symptoms in these cases that full doses of alkalies be administered at the period of height of digestion of the meal, in order that the too acid gastric contents, in passing into the intestines, do not inhibit or entirely destroy the pancreatic ferments To further prevent fermentative processes in the bowels he prescribes, as by far the most useful agent, beta naphthol This he gives in doses of 5 grains either in capsules combined with cannabis indica and such other drugs as may seem required, or he exhibits it in tincture of ginger, a dram of which dissolves the required dose To this is added one to two drops of oil of cajeput The last method of use, although not the most elegant, he regards as the most efficient It is taken in a small quantity of water and followed by a draught of a few ounces The naphthol which is thus first dissolved in ginger, on being added to water, in process of taking becomes reprecipitated in very minute crystals, less irritating than when prescribed in the form of powder and administered in wafer or capsule

New Method of Radical Cure of Inguinal Hernia without Sunken Threads —An article in the *Semaine Méd* of November 11, signed by Professors Duplay and Cazin, illustrates a way by which the hernial sac is tied without threads which frequently produce trouble later The sac is first opened and explored with the fingers, all adherences detached, and a portion of the omentum resected if necessary The sac is then completely dissected, and an assistant draws out the base with a pair of forceps as far and as long as possible, with that portion of the peritoneum normally situated 2 to 3 centimeters above the internal inguinal ring The operator then seizes the end with another pair of forceps and draws it around and through to make a knot, as high up as possible The ends remaining above the knot are then split and one end is drawn around and through in the same way, to make another knot, or passed through a slit in the other half, and this is repeated as often as the length of the sac will allow In one case the sac was so short that it was split in four pieces and the four ends tied in knots two by two A strong fastening is thus made without the introduction of any foreign substance, remarkably simple and perfect in its results When the traction ceases it sinks out of sight immediately, as in the classic operation It was always found that the highest part of the knot remained 2 or 3 centimeters above the internal inguinal ring The operation is then completed in the usual manner If the sac is too thick to be tied in this way, it can be split and knots made in each half separately

Vaccinia Remittens —Mr C F Sutton of Cheshire, in London *Lancet*, October 24, reports an anomalous case of vaccination as follows "In March last I vaccinated a child with calf lymph, and on the eighth day it had taken exceedingly well without the least sign of inflammation The vaccination ran its usual course and the scabs having come off left four perfectly healed marks, but to my astonishment a month afterward the same places began to rise again and resembled in every respect a newly vaccinated arm It ran the usual course again, becoming quite well The same thing occurred again early in June and late in July Much to my surprise, I was called to see the child on October 5 last, and I then found the arm again taking precisely as it did in the first instance and running the usual course, and any one not knowing the circumstances of the case could not have seen any difference between it and one freshly vaccinated The child is perfectly healthy and has suffered no inconvenience beyond the slight irritation due to vaccination I called the attention of the vaccination inspector to the case in September last and he informed me he had never either seen or heard of such a case "

Operation and Cure of a Case of Addison's Disease —A malignant retro peritoneal tumor was diagnosed in the case of a woman presenting all the symptoms of Addison's disease When removed it was found to be a suprarenal capsule in a state of tuberculous degeneration All the various symptoms disappeared completely after the operation, and the patient has enjoyed fine health ever since There were no organic lesions except this tumor and an old tuberculous focus in the lung It must be evident therefore that the condition of the capsule was responsible for the development of the disease Hence the removal of one or both capsules in Addison's disease seems to be indicated The operation is not difficult as a tubercular capsule is more easily separated from neighboring organs than a sound one —Oesterreich in the *Ztsch f Klin Med* , No 2 *Bulletin Méd* , November 15

Tannosal —Kestner has administered this preparation of creosote and tannic acid (3 to 2) to seventy five patients this year and reports the benefits equal to those derived from other creosote preparations, while there were no inconveniences from its use, except in three cases of intestinal tuberculosis when it produced colic It is better tolerated by the digestive apparatus than any other creosote preparation and produces an intensive diminution of the bronchial secretions, fully equalling, if not surpassing, terpin in this respect, while it increases the appetite and weight Its effect was more marked in children than in adults His dose was three tablespoons a day of the aqueous solution (never more than six) and for children as many teaspoons as they were years old —*Therap Woch* , November 22

Hysteric Deafness —Before commencing a more serious course of treatment, Cipriani advises treatment by suggestion when any unusual case of deafness presents itself, with a record of intermittency He describes a case of this kind in which he secured permanent cure by simple suggestion, although every indication pointed to rheumatic deafness from exposure, and the patient, a healthy farmer of 44, seemed absolutely free from neurotic tendencies —*Gazzetta degli Osp e delle Clin* , November 22

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SATURDAY, DECEMBER 26, 1896

EARLY AMERICAN PHARMACOPEIAS AND THEIR AUTHORS

The recent International Pharmaceutic Congress at Prague dealt with the history of pharmacopeias but devoted almost no attention to the evolution of pharmacy in the United States The first attempt at a pharmacopeia in the United States resulted at Lillitz, Pa , from the endeavors of Dr JAMES TILTON of Delaware to secure an official standard as a check on the rapacity of the contractors supplying Washington's army Dr TILTON was the first president of the Delaware State society organized in 1789 He was graduated from the University of Pennsylvania in 1771 In 1777 while in charge of the General Military Hospital at Princeton he exposed the "boodleism" and brutality which naturally resulted from laymen having charge of the medical department of Washington's army Through Dr TILTON the service was reformed Relatively inexpensive, readily ventilated, log hospitals took the place of the old mansions previously used The wounded did not suffer so much from unnecessary travel Mortality decreased and the health of the convalescent was much improved Dr TILTON, like most physicians of the time, took an active part in modeling the statesmanlike measures characteristic of the American Revolution He was several times a member of Congress During the war of 1812 he was made Surgeon-General U S A He was a man of great executive ability and an excellent sanitarian He died in 1822 at the age of 77 Among his contributions to medical literature was one advocating the sea-air in cholera infantum

The first edition of Dr TILTON's pharmacopeia appeared in 1778 It was based on the Edinburgh Pharmacopeia and went through a second edition in 1781, Dr WILLIAM BROWN editing it

The next pharmacopeia in the United States was issued by the Massachusetts Medical Society At the Oct 3, 1805, meeting Drs JAMES JACKSON and JOHN C WARREN were appointed a committee to prepare a pharmacopeia, which was adopted June 5 1807, and issued from the press Dec 17, 1807 Various other State and local medical societies adopted different official standards, but the need of a common standard was widely felt In 1815 the physicians and surgeons of the New York Hospital had prepared by Drs S L MITCHELL and VALENTINE SEAMAN, a pharmacopeia for that institution This for several years was of more than local authority (U S Pharmacopeia, 1890)

In January 1817, Dr LYMAN SPALDING of New York City submitted to the New York County Medical Society a project for the formation of a National pharmacopeia Dr SPALDING's plan was as follows The United States to be divided into four districts, northern, middle, southern and western, the New England States to form the northern district, New York, New Jersey, Pennsylvania, Delaware, Maryland and the District of Columbia, the middle district, and the States south and west of these borders to constitute the other two districts

The plan provided that a convention should be called in each of these districts, to be composed of delegates from all the medical societies and schools situated within each of them Each district convention was to compile a pharmacopeia, and appoint delegates to a General Convention to be held in Washington To this General Convention the four district pharmacopeias should be taken and from the material thus accummulated a National Pharmacopeia should be compiled

Dr SPALDING's plan was approved by the committee to which it was referred and subsequently through the agency of the New York State Medical Society was carried into effect This society issued circulars requesting the cooperation of the several incorporated State Medical Societies, the several incorporated colleges of physicians and surgeons or medical schools or such medical bodies as constituted a faculty in an incorporated university or college in the United States, and in any State or Territory in which there was no incorporated medical society, college or school voluntary associations or physicians and surgeons were invited to assist in the undertaking

The following organizations approved the plan of forming a National Pharmacopeia and appointed delegates to district conventions Massachusetts Medical

Society, June 2, 1818, New York College of Physicians and Surgeons, June 25, 1818, Maryland Medical and Chirurgical Faculty, June, 1818, Rhode Island Medical Society, September, 1818, Medical Society of the District of Columbia, Oct 5, 1818, Connecticut Medical Society, Oct 15, 1818, Yale College, Oct 28, 1818, Vermont Medical Society, October, 1818, Board of Physicians and Surgeons of the First Medical District of the State of Indiana, November 3, 1818, College of Physicians and Surgeons of the Western District of the State of New York, January, 1819, College of Physicians of Philadelphia, February 2, 1819, Medical Faculty of Brown University, March 15, 1819, Medical School at Lexington, Ky, April 1819, New Hampshire Medical Society, May 5, 1819, New Jersey Medical Society, May 11, 1818, Delaware Medical Society, May, 1819, Georgia Medical Society, May, 1819

The Medical College of Ohio and the Medical Society of New Orleans approved the formation of a National Pharmacopeia but did not appoint delegates The district convention for the New England States was held in Boston June 1, 1819, and a district pharmacopeia was adopted The district convention of the Middle States was held in Philadelphia June 1, 1819 Two outlines of pharmacopeias submitted by the delegates from New York and Philadelphia were by a committee there chosen, formed into one, which was adopted as the pharmacopeia of the middle district

There were no conventions held in the southern and western districts, but measures were taken by those concerned to secure a representation of the southern district in the General Convention at Washington The General Convention for the formation of a National Pharmacopeia assembled in the Capitol at Washington January 1, 1820, and elected SAMUEL L MITCHELL, M D, President, and THOMAS T HOWSON, M D, Secretary

The two pharmacopeias prepared in the northern and middle districts were submitted to examination, compared in detail, and their contents, with such additions as were thought necessary, consolidated into one work, which after full revision was adopted by the General Convention and ordered published by a committee, of which Dr LYMAN SPALDING was chairman It was published in Boston December 15, 1820, in Latin and English A second edition appeared in 1828

Before adjourning, the General Convention of 1820 made arrangements for the future revision of the work It instructed its president to issue, January 1, 1828, writs of election for the several incorporated State medical societies and incorporated medical colleges and schools in the northern district requiring them to ballot for three delegates to a General Convention to be held at Washington on Jan 1, 1830, for the purpose of revising the American Pharmacopeia, and that these several institutions be requested to forward to the president on or before April 1, 1829, the names of three persons thus designated by ballot, and the president of the convention was requested on the said day to assort and count the said vote and to notify the three persons who should have the greatest number of votes of their election, and in case there should not be three persons who had a greater number of votes than others, then the said president was desired to put a ballot into a box for each of those persons who had an equal number of votes and draw therefrom such number of ballots as should make the number of delegates three, and notify as before directed This resolution was to apply in like manner to the middle, southern and western districts There were to be three delegates from each of the four districts, the convention thus to consist of twelve delegates

Excellent as were these arrangements for the convention of 1830, a serious misunderstanding occurred, with the result that there were two pharmacopeias published, one in New York and one in Philadelphia The convention of 1840, however, was practically unanimous The later conventions have been held along the lines indicated in that convention

Among the pharmaceutic developments along the same line as the pharmacopeia were the dispensatories The most interesting of these are the American New Dispensatory and the American Dispensatory The American New Dispensatory, compiled by Dr JAMES THACHER, was endorsed in 1809 by a committee of the Massachusetts Medical Society, composed of Drs JOHN WARREN, AARON DEXTER and JOSIAH BARTLETT The last was one of the medical signers of the Declaration of Independence This dispensatory was based on the Massachusetts Pharmacopeia The American Dispensatory, based on the Edinburgh Dispensatory, was issued by Dr JOHN REDMAN COXE of the University of Pennsylvania It summarized all contemporary dispensatories of the continent of Europe

The matter of most interest in the Massachusetts Pharmacopeia and these Dispensatories, is materia medica Most articles on which much stress is laid by the sectarians of today are found enumerated therein The materia medica includes aconite, æsculus, apium, arctium, bryonia, asclepias, blessed thistle juglans cinerea, lobelia, rhus toxicodendron, xanthoxylum, rhododendron, actæa spicata, geranium maculatum, hamamelis virginiana, iris, podophyllum, scutellaria, and many other remedies which are claimed as discoveries of the sectarians These early American pharmacologic investigators seem to have been very keen sighted The recent onslaughts on sarsaparilla appear eighty years previous in the Dispensatories to which reference has been made

THACHER, for example, observes that sarsaparilla is a very inert, mucilaginous substance He gives an account of Dr CURRIE's treatment of typhoid fever with what is practically the cold water method of BRAND CURRIE adopted this method a little over a hundred years prior to BRAND The method was independently used in the New York Hospital by Drs BARD and D HOSACK in 1793 THACHER gives the following exceedingly interesting accounts of thermometry at a time when the procedure was not supposed to be employed by practitioners

"What thanks would not be due to him who should teach with certainty when to employ and when to avoid blood letting, and especially should he give so accurate a guide as the thermometer and the feelings of the patient as to heat when confirming each other?

"The thermometer indeed can not always be used by the country physician to whom we shall soon suggest a substitute, but to others, who can more easily obtain this useful assistant we address the following information

"JOHN HUNTER in the London Philosophical Transactions for 1778 (see also those for 1779) describes one of his own invention and of Mr RAMSDEN's workmanship which was short, slender and with so small a bulb that he could put the whole into a peacock's quill, even including the scale, which was movable and of transparent ivory, being in the form of a hollow tube and nowhere touching the bulb The results of this thermometer differed from those of others used by JOHN HUNTER and even from his own expectations It was this sort of thermometer which Dr CURRIE employed with his patients, taking care to make the stem bend backward in order to admit of his standing behind the sick, to avoid infection from their breath Dr CURRIE recommends as a further improvement a gauge like that used by Mr SIX in his thermometers made upon the plan of those invented by Lord C CAVENDISH (see London Philosophical Transactions for 1782 and 1757) But a thermometer with spirits of wine (which sufficiently corresponds with one of mercury in the high temperature here in question) would probably be visible enough to answer every purpose were the spirits as usual colored It does not appear why excessive diminutiveness is so necessary a quality in mere medical thermometers

"We have hinted that country practitioners must often be content, and may do sufficiently well, without thermometers, and especially in these parts of the United States where thermometers are so seldom found corresponding with each other, and where even if good they are with difficulty replaced in case of accident The uses of the thermometer in Dr CURRIE's system of practice were two, one to show the heat of the patient and the other the temperature of the water to be applied to him

"Let us begin with the latter subject It is known to every practitioner that boiling water is always of the same heat in the same state of the atmosphere Next it will soon be shown that water can always easily be found at hand at certain other known degrees of temperature Lastly, rules may be given for producing any intermediate temperature between that of boiling water and water of any other known temperature, merely by mixing in certain proportions and with certain precautions We shall now show that water may generally be found of several temperatures which are easily ascertained without the aid of thermometers In winter, water which has remained a certain time filled with ice or pounded snow, after it is poured off, will stand at the freezing point or at 32 degrees of Fahrenheit's thermometer Water will also stand at the freezing point when taken from underneath a surface of thick ice formed upon it in winter in a vessel of moderate size The average temperature of the air throughout the year may be known for any place and this temperature is one and the same with that of the springs of the place when first issuing from the ground and also of the earth of the place at a few feet below the surface The average temperature of each month also may easily be known for any place, and when known it will commonly nearly mark the temperature of the water accidentally found in any considerable vessel placed under shelter from the wind and sun but exposed to the open air, especially upon making certain obvious allowances

"Enough then has been said as to the fixed points of heat at which water may be found and the methods by which it may be tempered by being mixed in different proportions at different temperatures for the purpose of bathing, aspersing or moistening the bodies of different patients according to their respective cases Happily very great nicety is not found to be requisite, and perhaps the guess of the practitioner will always abundantly suffice In this case what has been said on these subjects will not be lost, since it will find its place with those attentive to meteorology and other branches of natural philosophy

"As to calculating the patient's heat without help from the thermometer, in general we may depend on the patient's feelings and rapidity of the pulse, the precedence of the cold stage of fever, the color of the skin, the freedom from perspiration, the fullness of the face and the marks of universal heat to the touch of the observer That the practitioner may not be misled by the remains of heat which the bedclothes may have kept in the patient from a preceding hot fire, let the bedclothes be thinned with judgment and for a short time, if the patient still remain hot, he will offer a new criterion as to his temperature

"If other rules are wanting the following are some which present themselves Take a short tube of glass exceedingly thin, and with a very small bore, having one end open and the other closed Having first heated it gradually by placing it outside in heated water, plunge its open mouth into a small quantity of spirits colored with cochineal, or of aquafortis made blue by vitriol or copper, or if quicksilver is at hand, put it into a little quicksilver As the air cools in the tube, fluid will rise into it, and when a very short column (amounting only to a drop or two) has been taken up, we have an instrument suited to our purpose A cork may be placed in the open end when this instrument is not in use to prevent dirt entering or the evaporation of the spirits or water but the cork must be carefully withdrawn to preserve the connection with the atmosphere, when the instrument is employed Let the practitioner place it during some time under his arm pit when at the sick bed, and marking the spot then occupied by the column of fluid, let him wipe the instrument and place it under the arm pit of his patient If the patient's heat is greater than his own, the air behind the column of fluid confined by the closed end of the tube, will now be most rarefied, and drive the fluid farther out than with himself, if the contrary, the reverse will happen This instrument must at some one time be compared with the thermometer merely to show how its scale of variation agrees with that of the thermometer, unless this can be guessed at by other methods But the degree in which an instrument of this sort will be affected by the changes in the weight of the atmosphere (for it is a species of barometer) render it necessary that the comparison of it with the heat of a healthy person should always take place An object to be further attended to is that the patient's heat be not only greater than natural, but at a high pitch even for fever heat

"Perhaps chemists may invent some compositions which by their melting or effervescence may indicate fixed degrees of heat, which may be contrived to serve as standards for the heat of fever

"With respect to the standard heat of the human subject, taken internally in a state of health, it varies with age, constitution, exercise, fulness from meals, and other circumstances independent of disease The usual average temperature is perhaps at 97 degrees, but eating, for example, increases it one or more degrees In disease, according to Dr CURRIE's observation, it sometimes in extraordinary cases sinks as low as 92 degrees and sometimes in cases equally extraordinary it rises to 105 degrees Repeated doses of the purple foxglove have reduced the heat to 89 degrees and the pulse to 32 in the minute"

These directions, it must be remembered were written long ere clinical thermometers became common They indicate, as has been repeatedly pointed out in the JOURNAL, that all medical discoveries take a long time to become established The Dispensatory of Dr COXE was more extended as to pharmacy and chemistry than that of Dr THACHER It gives all the synonyms of the coexisting dispensatories of Holland, Denmark, France Germany, Italy, Portugal Poland, Russia, Spain and Sweden, and contained an extended posologic and prosodial table

On the whole pharmacy at the beginning of this century occupied the place it deserves to occupy in American medicine and the Pharmacopeia had a respect which does not obtain today, but which it should have, for the sake of uniformity if for nothing else

THE AMBULANCE SHIP

Even non-nautical readers of sea tales and naval history, up to quite a recent date, had become tolerably familiar with the various classes of the white winged creations of the naval architect They knew that a sloop-of-war had three masts and a brig only two, that a frigate had two gun-decks and a line-of-battle ship three or four, but their knowledge avails them little in reading of the battle ships, armored cruisers, commerce destroyers, coast defenders, monitors, torpedo boats and torpedo catchers that constitute the navies of the present decade Today, another craft has been baptised—the *ambulance ship*—even before her keel has been laid, though it is by no means certain that she will have a keel

The Surgeon-General of the Navy, more than a year ago, had outlined the functions of a contemplated ambulance ship, and in his annual report of this year, which has just been published, he reverts to the subject and urges with greater earnestness and with the countenance and support of the Navy Department, the importance of a vessel, whose designation indicates her special office—literally a floating ambulance, which like the vehicle on shore is to gather the sick and wounded from the site of conflict and conduct them to a place of safety The ambulance ship must needs also be a temporary hospital ship, equipped with appliances and apparatus that may be required for even capital operations, but precisely how she is to be rigged, outfitted, equipped, officered and manned is yet a matter of future development "Considerable attention," says the Surgeon-General, "is now being paid to the construction of such vessels abroad, and it is universally conceded that they should be designed and built for this particular duty, and considered an essential part of the fleet of war" "These relief ships should be fast steamers, fitted with comfortable beds, and equipped and conducted by the officers of the medical staff and men of the hospital corps, who have been thoroughly trained in time of peace in the duties of nursing and caring for the wounded" "The plans suggested for such vessels provide large wards for officers and men on the spar deck for treatment of serious cases, and additional wards, affording ample space, on the main deck and lower deck Natural ventilation is assisted 'by a steam spray extracting apparatus, as well as by a steam fan blast that pumps in an abundant supply of fresh air' "

Hospital ships have existed for years The U S Hospital Ship *Idaho* was established at Nagasaki, Japan, in 1868 At the same time the British Navy had the Hospital Ship *Actæon* stationed at Shanghai and the *Princess Charlotte*, an old four-decker, at Hong Kong This class of vessels has not however, been considered satisfactory or desirable by our own medical officers, except in insalubrious or inaccessible localities, where it was absolutely impossible to properly care for the sick and wounded on shore Other things being equal, it is beyond question that a hospital on shore is better than one afloat There is healing balm in the mere touch of the earth, in the scent of vegetation, the odor of the flowers, this, without contesting the marvelous recuperative effect of ocean therapy in chronic disorders, nervous exhaustion, tardy convalescence, etc, as shown after long sea voyages over smooth seas, in temperate climates, on board spacious, well-ventilated, dry, clean ships Hospital ships of this sort would be of the utmost advantage, and it is to be regretted that they exist only as the dream of enthusiasts

The stationary Hospital Ship for general purposes is only of value in malarial localities, where it is unsafe to remain on shore especially after sundown, but a hospital ship which can accompany fleets or squadrons and be anchored in a safe harbor, with close communication with the fleet or squadron, from the several vessels of which their invalids can be quickly transferred, is undoubtedly "an essential part of the fleet of war," and it is just here that the fast steaming ambulance ship comes into service as the feeder for such a hospital ship, primarily, or for the station hospital ashore when the latter is accessible Such a ship must be able to approach near enough during an engagement to receive the wounded, care for them temporarily and transport them to a place of safety and be provided with steam hospital launches to run alongside combatant vessels in action, when the risk of exposure of the larger vessel would be too great With all this, however, the need for proper hospital establishments on board the individual vessels will still exist The speedy removal of every serious or protracted case of illness, such as fever, phthisis and chronic dysentery will relieve the local requirements, but, however, admirable the provisions for the expeditious transfer of the wounded may be in time of battle or in squadron evolutions, there must be no relaxation of the demand for proper quarters for the sick and disabled on board each vessel, on which the present Surgeon-General has positively and persistently insisted The "Sick-bay" or *Ship's Hospital*, as it is more appropriately termed, should be located in that part of the vessel, where air-space, ventilation, absence of disturbing causes and isolation can be best secured It should never be where, it has been heretofore uniformly established, in the restricted narrow space on the berth-deck, at the extreme bow, directly under the chain cables and over the paint-room The dispensary, so-called, ought rather to be the medical office, with a cabinet dispensary and surgical outfit, but primarily an office where men can be examined by the medical officers, without interruption or exposure The large proportion of the sick who are not bed-ridden, after treatment in this office are better on deck in the open air, the Geneva Cross brassard identifying them as well to prevent their being called upon for duty as their interference with the ship's routine work. For bed-ridden patients, a limited bulk-headed hospital of rigid dimensions is less desirable than one which can be contracted or enlarged by screening off a designated space of the gun-deck by canvas partitions attached to brass sockets in the deck below and by hooks to the beams over-head, permitting, when there are no sick requiring isolation, the whole deck to be thrown open for the general ship's purposes. There must be, however, a positive provision in the naval regulations for the assignment to hospital purposes, of an indicated portion of the deck, shown on the ship's plans and conspicuously marked by brass sockets on the deck, whenever, in the opinion of the medical officer this shall be necessary, otherwise, as occurred some years ago, when the medical member of the Naval Board of Inspection recommended that one of the two bulk-headed hospitals of a newly built vessel might be reserved for this very purpose, the part of his recommendation abandoning one of the bulk headed hospitals was adopted, and the apartment surrendered occupied as a gunnery store room.

A large, commodious, well-lighted apartment, as far aft as possible on a gun-deck, where it will be away from coal chutes, dynamos, steam capstans and the like, should be assigned to the exclusive use of the medical department for the examination of the sick, inspection of recruits, performance of operations, administration of remedies, preparation of official records and care of instruments and apparatus, with bathing facilities and cots for a limited number of patients, but we doubt whether the Surgeon-General of the Navy is ever taken into council in the building of a vessel as to the proper location and dimensions of its medical establishment, any more than he is invited to say what shall be the cubic air-space for the commanding and other officers or the men of the crew. It is by no means certain that he has any voice as to the nature and quantity of the food supply, or its preparation and distribution, or whether he is ever consulted as to the arrangement of meals and the hours of labor, yet all this is legitimately the duty of the health officer of the community, which is the primary function of his office as preserver of the efficiency of the human element of the fighting machine.

It is to be hoped that the energetic incumbent of the office of Chief of the Bureau of Medicine and Surgery of the Navy Department Dr. Tryon, may not only successfully accomplish his proposed construction of an ambulance ship for every squadron, but succeed in locating and equipping the hospital on board every naval vessel in commission as thoroughly as he has the naval hospitals on shore. He has replaced the disreputable market wagons heretofore used for the transportation of the sick by modern ambulances, and has instituted operating rooms that are not surpassed by any in the world. There is no fault to be found with the supply-table except on the score of too great liberality. All this done, hospital ships constructed and ships' hospitals perfected, there will still remain the subject of a naval hospital corps, to make the Medical Department of the Navy of the United States, on shore and afloat, all that it should be in *matériel*, legislation by Congress can alone make it what it ought to be in *personnel*.

THE OBSTETRIC SIDE OF HYSTEROPEXY

The current literature of the last three years has been teeming with reports of complications in pregnancy and labor subsequent to, and directly traceable to, a previous operation of ventral or vaginal fixation of the uterus for retrodisplacement or prolapse of that organ. So frequently have these unfortunate results occurred, *especially after vagino-fixation, that* the latter operation has already been practically abandoned, even by its originators, and the most earnest advocates of the ventral operation have modified their technique in various ways in an endeavor to avoid as far as possible the difficulties alluded to. The variety and comparative frequency of the complications after hysteropexy have recently been presented by Dorland of Philadelphia, in a comprehensive paper on the subject, and the deductions that he has drawn from his investigations are well worthy of a few moments' consideration.

In the first place, he ascribes all of the ill results noted not to the operation *per se*, which, he rightly claims, is the most suitable cure for the uterine displacements in question, but to some defects in the technique. The truth of this statement is amply proved by a comparison of the results obtained by the German and American operators. In the hands of the former the operation becomes no longer that which was intended by its originators—namely, a true *suspension* of the uterus, whereby that organ is freely mobile—but an absolute *fixation* of the uterus to the anterior abdominal wall, rendering its growth and development in a subsequent gestation either an utter impossibility or a matter of extreme difficulty. The American gynecologists, on the other hand, who have studied the problem most assiduously, have concluded that the suspension is best accomplished by including in the grasp of the sutures—which should not be placed on the posterior surface of the uterus, but upon the fundus just posterior to the transverse median line—the peritoneal surfaces only of the uterus and abdominal wall. All scarification of the apposed surfaces is carefully avoided, and the uterus remains practically free to move in any direction. The great majority of the complications reported have followed the German method of operating, thereby demonstrating the undoubted superiority of the method practiced in this country

Another defect in the technique of the operation is to be found in an improper implantation of the sutures into the abdominal wall If they be placed too far above the symphysis pubis, the uterus is lifted out of the pelvic cavity and becomes an abdomino-pelvic organ, or the entire structure, cervix included, may lie above the pelvic brim, while if the sutures be inserted too low on the anterior abdominal parietes there results a sharp anteflexion of the uterus together with an anteversion, the cervix being carried far back and up toward the promontory of the sacrum, where it may be entirely out of reach In addition to this unfortunate state of things, the tendency of the fundus uteri to return to its normal position results in serious traction upon the bladder with various functional disorders of that viscus

The obstetric sequels of the operation as demonstrated by DORLAND's researches are intensely interesting Transverse presentations of the fetus occur with an astonishing frequency, such being noted in 3 35 per cent of the reported cases This, as stated by the author, is due to the inability of the uterus to develop in its longitudinal axis as a direct result of the fixation, a compensatory growth occurring in the transverse axis which thereby becomes the longer and most readily accommodates the growing embryo and fetus Painful traction upon the site of fixation, a marked aggravation of the normal nausea and vomiting of pregnancy, improper placental implantations (placenta previa), inflammatory affections of the deciduæ and other membranes, and varying degrees of uterine inertia, rendering delivery by nature difficult or an impossiblity or favoring the occurrence of postpartum hemorrhage and puerperal sepsis, are other anomalies recorded after the operation In over half of the cases, or more accurately in 62 01 per cent of the pregnancies, some abnormality was noted, either in gestation, in labor, or in both Version was performed nine times, forceps were employed eleven times, in four instances Cæsarean section has been performed, retention of the placenta occurred three times, the fetal mortality was 17 87 per cent and the maternal mortality 1 11 per cent These statements are quite sufficient to indicate the truly serious results that may follow the apparently harmless operation of abdominal hysteropexy, and the question now arises, Are we justified in performing that operation in young women, or in those in whom the possible occurrence of pregnancy may exist? It may be that a strict observance of the proper technique as already suggested, may largely do away with subsequent complications, but this has not been positively demonstrated as yet

Let us have a Department of Public Health!

THE MILWAUKEE CHICAGO DIPLOMA MILL

Many readers of the JOURNAL have been active in sending to the editor copies of the circulars of the Wisconsin Eclectic Medical College, an institution to which we have several times referred in no complimentary terms

The first step taken by the JOURNAL was to place all the information in its possession in the hands of the Attorney General of the State of Wisconsin, with a view to having the charter annulled That officer, keenly alive to the disgrace being placed upon his State by this institution, very promptly took steps for the annulling of the charter, a petition for which was printed in full in the JOURNAL, June 20, 1896

Within the last month we have been in communication with the postoffice authorities of Chicago Postmaster HESING very promptly referred the papers to the postoffice inspector, Captain STEWART, who has been after the diploma mill for fraudulent use of the United States mails

A reporter for the *Chronicle* of Chicago undertook the hunt of "Dr" FRED RUTLAND, whose office purported to be at 1001 West Congress St, in Chicago He found a small two story brick house, without a sign on the door and on ringing the bell his ring was answered by a Chinaman, who said that no one was admitted, that Dr RUTLAND lived in Milwaukee, and the mail of the "college" was sent there The *Chronicle* man says

> The Wisconsin Eclectic Medical College has on its printed matter no reference to its Milwaukee address, although its office is by charter compulsorily in Milwaukee Until recently it did business there, but since August the business has been transacted from Chicago The circular addressed to Dr Brown was sent to him because his name was starred in the *Medical and Surgical Register*, a publication of R L Polk & Co, the directory printers Referring to that publication the Wisconsin Eclectic Medical College is found to have headquarters at the home of Dr Rutland at 1809 Fond du Lac Avenue, Milwaukee It is said to have been organized in 1884 and to have graduated its first class this year It is said to have three professors, three lecturers and two demonstrators Referring to another portion of the book, Dr Fred Rutland, the president of the college, is found to be a graduate of the Illinois Health University This institution, it is stated in another part of the *Register*, issues diplomas that are not recognized by the Illinois State Board of Health Dr Rutland's graduation from that institution was quite recent When he obtained his degrees of S D and Ph D that appear in the circulars is not told by the *Register* It is further stated in the *Register* that he was surgeon and medical officer of the Wagga Wagga district of mounted police, New South Wales, and that he is a member of the National Union Medical Society of Chicago As to his associates, Dr Podmore and Dr A Neve Rutland, the *Medical Register* is silent
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> Manager Denser of R L Polk & Co said that they had had inquiries about the Wisconsin Eclectic Medical College and that several of the queries had come from insurance companies that had applications for positions as examiners from holders of the college's diplomas

Among the JOURNAL's esteemed correspondents we are happy to number Dr PAUL R BROWN, Surgeon of the United States Army, now stationed at Fort Hamilton, who sends a letter he has received, together with his reply, which we herewith reproduce

CHICAGO, November 16, 1896

Dr Paul R Brown, Fort Hamilton, N Y —Dear Doctor We notice your name in a medical and surgical directory but with a * appended This usually means (although not necessarily so) that the person so designated is not a graduate of a medical school and has no diploma If, however, it should be that you are a graduate and have a regular diploma then we can but tender our most sincere apologies for troubling you on the matter But, on the other hand, if you are not a graduate and have no regular diploma then the perusal of the inclosed prospectus can not fail to be of the most primary importance and interest to you We would also desire to draw attention to the fact that to practicing physicians our fees are much reduced from the regular rate To this class our fees are $35, all inclusive

As proof of our legal standing and right to confer the degree of M D we can supply certified copies of our charter at 25 cents each, simply covering the cost of certifying officer's fee

Trusting soon to hear from you and standing ready to answer any or all questions you may wish to submit, we are, yours, very sincerely

Wisconsin Eclectic Medical College,
Fred Rutland, Ph D , M D

To the circular Dr Brown replied as follows

Fort Hamilton, N Y , November 23, 1896

Fred Rutland, Chicago, Ill , Sir I have never known nor heard of an instance of more unadulterated impudence than your action in daring to address a graduate in medicine of twenty-nine years' standing and a surgeon in the United States army for the last twenty-three years, and offering to sell him one of the products of your diploma manufactory

As advertising seems to be what you most desire I shall take great pleasure in forwarding your communication to the Journal of the American Medical Association, published in Chicago, which will undoubtedly advertise the institution with which you are connected in a manner well adapted to show up the dirty, mercenary business it is engaged in With the most profound contempt for you and yours, I remain, your obedient servant,

Paul R Brown, M D
Major and Surgeon, United States Army

The worst feature of the matter is that this circular by Rutland, which has been sent broadcast all over the United States, from Maine to Texas, has been sent in thousands of cases to prescribing druggists, many of whom have been gulled into purchasing the alleged diplomas

A recent issue of the Detroit *Journal* states that there are about a dozen "graduates" of this diploma mill in that city, and from all accounts it would seem that Philadelphia, some years ago the home of the notorious Buchanan diploma mill, will now have to yield the unenviable precedence for number of this sort of graduates to the Milwaukee-Chicago concern There, however, we believe the parallel ceases, as Pennsylvania sent Buchanan to prison, whereas, unless the Federal Government deals with the interesting "Dr" Rutland, he is likely to suffer no worse mishap than the loss of his State charter

Mr R L Polk, of the *National Medical Register*, stated in a recent interview

"That man Rutland has been carrying on this diploma business for about a year He and his wife figure as president and secretary of the Wisconsin Eclectic Medical College, respectively Some time back Rutland was in the habit of referring to our medical directory by name But we stopped that and now he only mentions a medical and surgical directory, of course referring to ours, as there is no other published

"I believe Rutland also did business in Chicago, and have a strong suspicion that he was connected with the defunct 'health university' of that city, the charter of which was recently annulled by the courts of Illinois

"The *modus operandi* at the 'college' is said to be as follows Students arrange for the examinations before a notary public of their town and if the examiners of this college can 'satisfied' they can be legally and lawfully graduated, r
ing the diploma of the college co erring gree of do
medicine without attendan oll

"Last spring we receive etary o

State Board of Health of Wisconsin, informing us that the Wisconsin Eclectic Medical College of 1809 Fond du Lac Ave , Milwaukee, is a diploma mill, and stating that the attorney general of the State would attempt to have the charter annulled in court A letter recently received by us from Walter Kempster, Commissioner of Health of Wisconsin shows that the charter has been annulled and that the parties who carried on the institution have left Milwaukee I believe they make their headquarters in the Garden City now "

In response to a telegram sent December 19 to the Attorney General of Wisconsin, we were informed that the case was still pending in the court, and that the charter of the institution has therefore not yet been annulled

CORRESPONDENCE

New York, Nov 25, 1896

To the Editor —In your issue of October 31, page 968, is contained a communication signed Charles Graef & Co , in which that firm, endeavoring to make a correction of a former article in your esteemed paper, take occasion to say that "The numerous Hungarian bitter waters coming from Buda Pesth which are called 'Hunyadi' this or that, are strictly medicinal," and then refer to a high eulogy paid to a water recently introduced by them in the market, "'Apenta' from the Uj Hunyadi Springs in Ofen "

I desire to correct an apparent misconception contained in these statements which, if left unchallenged, can not fail to do great harm to the business of the undersigned As a result of a protracted litigation carried on by Mrs Emilie Saxlehner, widow of Andreas Saxlehner, against the Uj (new) Hunyadi Company, Limited, before the Royal Hungarian Minister of Commerce, a decision was rendered by him in August, 1896, by which the sole right of the firm of Andreas Saxlehner to the use of the word "Hunyadi" in connection with bitter waters was finally and authoritatively recognized on account of the prior adoption of this name by him in the year 1863 and its continuous use for his "Hunyadi Janos" bitter water ever since that time

I beg to send you enclosed herewith an abstract of the lengthy decision, from which you will see that the trade marks or names "Uj Hunyadi," "Uj Hunyadi Company Limited," and "Apenta" "Uj Hunyadi" registered by the defendant company in Buda Pesth, have been canceled as conflicting with the exclusive rights of the firm of Andreas Saxlehner to the word "Hunyadi " Similar decisions have been made against all the various bitter waters which had adopted the word "Hunyadi" as a part of their names

Without quoting at length from the decision against the Apenta (Uj Hunyadi) Water, I will only call your attention to the concluding sentence, in which it is said

"The trademark forming the subject of these proceedings, while avoiding as much as possible exterior figural similarity, yet with respect to the designation of the article, evidently aims at identifying itself with the Hunyadi bitter water and at securing for itself by means of using this name that commercial position which the Hunyadi water has gained in the trade for thirty years "

The undersigned intends to protect his exclusive rights to the name "Hunyadi" water by appropriate action in court against all imitators of his labels or trademarks, but as proceedings of this kind are necessarily slow, I ask that you accord space in your valuable paper to this necessary cor
e Respectfully yours, Andreas Saxlehner

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land and other districts of
smoky huts

PUBLIC HEALTH

The French National League Against Alcoholism—One of the measures of the league is a public meeting occasionally on Sunday afternoons, when the dangers of alcoholism from a physiologic and medical point of view are presented by well known experts and the actual state of alcoholism exposed

Lepers Flocking to Bogota—Carrasquilla's announcement that he had succeeded in curing leprosy with his serum therapeutics has attracted great numbers of lepers to Bogota where he lives, until the Colombian government is dubious whether his alleged discovery may not be a calamity, especially as he stated that after the first injection the disease was arrested This was assumed to mean that it ceased to be contagious and hence the lepers and the people no longer take precautions against the spread of the disease The government and the Academy of Medicine are now investigating the permanent results of the treatment in a scientific and thorough manner, to determine whether it is best to continue the Carrasquilla Institute at its present capacity, which requires a monthly outlay of $6,000, or to reduce it and establish a great national leprosorium to exterminate the disease by isolation —*Revista Médica de Bogota*, August

Liability of City for Acts of Health Physician—In the absence of a statute, the court of civil appeals of Texas says, in the case of Bates v City of Houston, decided Sept 17, 1896, that the liability of a city depends upon whether or not, in the acts complained of, its health physician was its servant or its agent engaged in the doing of an act for the private corporate benefit of the city, or was a public officer in the discharge of public governmental duties, in which latter event the city would not be liable Here the city had been sued to recover damages alleged to have been sustained by reason of the acts of its health physician in quarantining the plaintiff's family because they were supposed to be afflicted with smallpox The powers conferred upon the city council were ample enough to authorize an ordinance providing for the isolation and quarantine of persons infected with dangerous and pestilential diseases, and the court says that there can be no difficulty in placing this case clearly in the category of those in which the city is exercising a governmental duty for the general benefit of the public at large, and so it affirms a judgment in favor of the city

Shall a Wet Nurse be Employed for the Child of a Cured Syphilitic?—Fournier's lecture on this subject is going the rounds of our exchanges, appearing in full in several languages He decides the question most positively in the negative, except in mild cases that date from at least ten years back and received effective treatment at the time, with no manifestations for several years, otherwise, not Even if the father has been cured for years, and whether the child shows traces of syphilis or not, the disease may be communicated to the nurse, and the physician should never lend his countenance to such an immoral proceeding, even if the nurse is willing for extra compensation to assume the risk No one but a physician knows what that risk is The mother should by all means nurse the child herself if possible, as such children need a mother's tender care more than others She is protected by that strange provision of nature that the mother is never infected by her syphilitic child after birth In all his extensive experience he has never known this law to fail If it is impossible for the mother to nurse the child, it must be brought up on sterilized milk—"milk changed from a poison to a food by that great man whose name is recorded by some benefit to humanity on nearly every page of pathology"—*Presse Méd*. November 25

Premises that Menace Public Health—In the case of Egan v Health Department of the City of New York, where it was sought to obtain an injunction restraining the health department from enforcing an order requiring a tenement house to be vacated unhealthy, affidavits were offered upon the part of the defen ant to the effect that the sink in the yard was filthy, emi offensive odors, and sour smelling, that the cellar of the ing was only five and one half feet high, was not cemented, damp through want of ventilation, that many of the rooms the tenement in question were ventilated from a narrow spa at the bottom of which there were accumulations of dirt an filth which rendered the air foul, impure and unhealthy, an that the whole building was in a very offensive condition f dirt and vermin, was unfit for human habitation, and endangering the health of the occupants of the other houses in th vicinity If the premises in question were in the conditi sworn to, the appellate division of the supreme court of N York holds, Oct 23, 1896, they were a public nuisance, whic the board of health were justified in summarily abating I continuance would be a menace to the public health And th foregoing allegations being in no way met by the plaintiff, wh relied upon general allegations that no pestilence or contagi disease had ever occurred in the building, that all the sinks and drains were in perfect sanitary condition, and had been continually kept in that condition, that the entire plumbing and drainage of the premises were in perfect condition, and that the heights of the ceilings were seven feet seven inches, the court holds that the court below was justified in refusing to interfere, as a court should not, even if it had the power, except upon good cause shown, interfere in the measures taken by public officials to protect the public health If the health department had acted without justification, the court points out that the plaintiff had her remedy at law, under laws 1882, chapter 410 (Consolidated Act), section 599, which provides that any person whose property may have been unjustly or illegally destroyed or injured pursuant to any order of a board of health, may maintain an action against it for damages

The Health Report of the City of Chicago for November, 1896, contains the following extracts from a paper on the relation of the medical profession to the water supply of Chicago, read before the Chicago Physicians' Club, Nov 30, 1896, by F W Reilly, M D, Assistant Commissioner of Health

The history of the efforts to secure a pure water supply for Chicago is inseparably connected with that of the medical profession of the city Forty seven years ago Dr N S Davis arrived in Chicago in the height of the cholera epidemic of 1849 Before the epidemic was over he had traced the relationship between the greater incidence of the disease in certain localities and the use of water from surface wells, and at once began an agitation for pure water from the lake During the summer of 1850 he delivered a course of lectures on the sanitary conditions of the city and pointed out the means for their improvement The plans he then suggested for a pure water supply and for its necessary complement—the proper disposal of the sewage of the city—are the basis of all that was done toward these ends during the subsequent forty years

Only the merest mention may be made of those who followed the initiative of Dr Davis and persistently pointed out the evil effects of impure water and urged measures for preventing the pollution of our source of supply The roll would include the names of almost every man prominent in the profession in the early days, Brainard, Egan, McVickar, Boone, Paoli, Ross, Lyman, Holmes, Byford and their colleagues, among whom may be especially noted Dr James Van Zandt Blaney, who, while the writer was an assistant in his laboratory in "Old Rush" in 1855-56, made the first chemic analysis of Lake Michigan water, Dr Hosmer Allen Johnson, subsequently a sanitarian of national reputation, and Dr Edmund Andrews, whose report on the erysipelas epidemic of 1863 was a scathing indictment of the municipal indifference which had allowed the river to become an open cesspool, with here and there an independent pollution, which he describes with grim humor, as answering "every purpose for the increase of medical practice in general and of erysipelas in particular"

To no other member of the medical profession, however, if to any other citizen, does Chicago owe so much in this connection as to the late Dr John H Rauch Indefatigable as were his labors in the cause of medical education and far reaching as were their results during his lifetime; his efforts toward the solution of the sanitary problems of Chicago were of even greater and more direct importance to the prosperity and the health of this community The work that he did lives after him in the parks and boulevards of the city, a direct result of his monograph on "Public Parks, Their Effects upon the Moral, Physical and Sanitary Conditions of the Inhabitants of Large Cities, with Especial Reference to Chicago " It lives after him in the suburban cemeteries which now receive the city's dead, without offense or menace to the living, the result of a paper read before the Chicago Historical Society in 1858, entitled "Intramural Interments in Populous Cities and Their Influence upon Health and Epidemics " His work lives after him in the present drainage and sewerage system, which he so persistently urged, and concerning which, in his report to the Chicago Board of Health in 1869, when the average death rate for twenty five years had been over thirty in the thousand—he wrote as follows

> From the results of drainage and other sanitary measures carried on in this city, it may be inferred that the judicious expenditure of money for sanitary purposes is a sound maxim of municipal economy and from past experience I am satisfied that the mean annual death rate can be reduced to 17 per 1,000 by continuing in force the present sanitary and drainage regulations, thereby making Chicago one of the healthiest cities in the world

In his presidential address before the American Public Health Association he cited this prediction, together with other passages from his reports and papers, with the following comment

> I introduce these quotations simply to show that sanitary science has made sufficient progress at the present time to admit of the supreme test which science falsely so called can never endure—that of verification by subsequent experience

Dr Rauch fortunately lived to see the verification of his prophecy "by subsequent experience " The year before his death, in March, 1894, the mortality rate of the city was only 16 9 per 1,000 of its population—a fraction less than that which he had asserted, twenty four years before, was attainable if the plans originally formulated by Dr Davis in 1850 should be carried out

And Rauch, too, was a prophet not without honor—save among his own people

He lived, however, to see the fruition of his efforts for the protection of the water supply of the city in the advanced stage of work on the great sanitary waterway and drainage channel He foreshadowed in a general way, the plan, now in progress, for the ultimate disposal of Chicago sewage and consequent protection of the water supply, in his annual report for 1869, and from that time until work on the sanitary waterway was actually begun he continued to accumulate facts and present arguments which were finally successful Probably no other one demonstration had more weight in determining the adoption of the present plan than that developed in the study and collation of the results of Prof J H Long's analyses of the sewage contents of the Illinois and Michigan Canal and of the waters of the Illinois River as far south as Peoria, made in the summer of 1886 These analyses were part of a plan projected by Dr Rauch, and carried out under the direct supervision of the writer for an investigation of the water supplies of the State, with especial reference to the progressive decomposition of sewage in running streams, first between Chicago and St Louis and subsequently in other Illinois water courses

My collation of Prof Long's analyses between Bridgeport and Peoria showed that more than one half the sewage pollution of the canal disappeared before reaching Lockport, nearly one third of the remainder was lost in the next four miles, or 33 miles from Bridgeport, while at Channahon, 48 miles from the city, no trace of sewage was detected These results were so unlooked for that Dr Rauch hesitated to accept them Water analysts had asserted that the self purification of a polluted stream was impossible—as one phrased it, "no river in the world is long enough to purify itself after it has once been contaminated with organic matter "

The investigations were, therefore, repeated in the following winter 1886 87, again in the summer of 1888 and still again in the spring of 1889, with substantially similar results in every case Subsequently Prof Pettenkofer caused a similar investigation to be made of the river Isar, which receives the sewage of Munich Within a mile below the point at which the Isar receives the Munich sewage the *beggiotoa*, or sewage fungus, was found growing in abundance but the last traces were found at Garching, less than ten miles below Munich The chemic analyses gave corroborative results, while Pettenkofer himself reports that he found 198 000 bacteria to the cubic centimeter at the mouth of the sewer and only 3 600 at Freising, twenty miles below He distinctly asserts that "*sewage is decomposed in running streams and is rendered harmless in the course of a few miles' flow* "

There is no scientific ground for believing that Chicago sewage ever reaches the Mississippi river, while as for the Illinois its waters are naturally not potable and have long since been abandoned by many of the valley towns as a source of water supply It has its origin chiefly in marshy areas, whence it becomes highly charged with organic matter, is malarious, readily stagnates and has scarce enough free oxygen to support fish life With the contribution, through the drainage channel, of from 300,000 to 600,000 cubic feet of water per minute from Lake Michigan with its excess of oxygen, not only the navigable and economic, but the sanitary conditions of the river will be immensely improved Mr Lyman E Cooley, who has already addressed the Club on this subject, recently suggested to the writer that the profitable disposal of sewage may, after all, lie in this direction Fish will not live in the Illinois above Morris, 60 miles from Chicago, nor for 20 to 30 miles below Peoria—beyond which distance the stream purifies itself so that fish are again found U S Fish Commissioner Bartlett reports that in 1893 eleven million pounds of fish were taken from the other stretches of the river—a more profitable crop, as Mr Cooley puts it, than any garnered from the prairies of the State, acre for acre

Section 20 of the Sanitary District Act provides that the degree of dilution in the drainage channel shall not be *less* than 200 cubic feet per minute for every 1000 inhabitants, and it *must* be as much more as is found necessary to keep the waters of the channel in a condition " neither offensive nor injurious to the health of the people of the State " With this condition maintained it is believed that fish will live in its waters throughout, except at sewer mouths or in the vicinity of special pollution It is certain that they will be restored to the full length of the Illinois river to convert the wastes and refuse of every town upon its banks into a profitable food crop

Such adverse criticism of the drainage channel as is still met with is generally found, on examination, to be due to misconception of its character and purpose Its essential purpose is to keep Chicago's sewage from polluting Chicago's twenty odd miles of lake frontage and the lake itself, from which its water supply is drawn This is a sanitary necessity even though every drop of Chicago's drinking water should be filtered or otherwise purified—as it will have to be unless relief is speedily afforded through this channel and its essential complement, the intercepting sewers In character, it is a new tributary of the Illinois river, with a less degree of organic impurity than any other of its tributaries, and destined to materially improve the sanitary conditions of the entire Illinois Valley—the ' great malaria preserve of the State,' as it has been called

Prefacing a chapter on the medical history of Chicago, a local historian has writen

" When negligence permitted the condition of the city to become unhealthy in the extreme—an invitation to epidemics—the physicians persistently sounded the alarm that ultimately caused the citizens to demand of the authorities purification and the establishment of sanitary laws and officials The system of sewerage adopted by the city was substantially a mode suggested by a physician The method of drainage was that promulgated by a physician"—and in every effort for the betterment of the conditions of life in Chicago the physicians of Chicago have been the pioneers

Disinfection of Infected Apartments by Vapor of Formaldehyde —In *Hospital*, July 25, Dr H W Jones gives an account of some of the latest work done with formaldehyde as a disinfectant of rooms and hospital wards The experiments of Drs Roux and Trillat have shown that the dust on the walls could be completely sterilized, in the case of dust on the floor the sterilization was not so complete In one case, specimens of dust from the sweepings of a house were placed in twelve receptacles in different parts of an inhabited house of three stories Ten liters of formalin were used, and the apparatus allowed to work for four hours Half the specimens used for sowing on bouillon were washed in ammonia The result was as follows Ground floor, four specimens, bouillon cloudy after forty eight hours in two cases Room furthest away, three specimens, bouillon clear in all cases Room on first floor, one specimen, all the bouillons clear Room on second floor, four specimens, all clear There was nothing extraordinary in the fact that two of the specimens on the ground floor were not sterilized, as they were near a very badly fitting door "As regards penetrating power, the results are no less conclusive Thus Dr Bosc of Montpelier, found that staphylococci concealed in the pocket of a coat, and colon bacilli placed under a mattress folded on itself, were rendered absolutely sterile Roux and

Trillat have discovered an ingenious method of testing this penetrating power The action of formaldehyde on gelatin is to render it insoluble, to make use of this property as a test, little cubes of glass are coated with liquefied gelatin When the gelatin has set, these are placed in various positions in the room which is being sterilized, and after the process is completed examined by immersion in boiling water It is found that on those cubes which have been exposed to the action of formaldehyde, the gelatin coating is insoluble Another test, used by the same observers, depends on the power which formaldehyde possesses of converting anilin reds into blues or violets Bits of cloth dyed with fuchsin can be used in this way as tests, or a combination of this and the gelatin test can be used, the gelatin being dyed with fuchsin before the glass cubes are coated Roux and Trillat further demonstrate that animals can live in an atmosphere that has been treated by formaldehyde vapor, if precautions are taken to first get rid of the vapor This is done by washing first with a solution of ammonia, and then with sulphuric acid This treatment would have no chemic action on any oxids of carbon that might have been formed during the disinfecting process, so that it may be taken as proved that the process is unattended by any risk for the evolution of carbonic oxid There is yet another point which has been brought out by these experiments on formalin It has been proved by Pottevin and also by Roux and Trillat that to obtain the best results a temperature of 35 degrees F is necessary Still, it was found by actual experiments in rooms that it is possible to completely sterilize walls, ceilings, floors, dust, air, and all contents at the ordinary temperatures There can be little doubt that from the point of view of preventive medicine, this is one of the most important practical discoveries that has been made for many years "

ASSOCIATION NEWS

List of Presidents of the American Medical Association

To answer inquiries and for the information of the members we have compiled a list of the Presidents of the ASSOCIATION from the beginning

Dr Jonathan Knight, (President of the convention)	
Dr Nathaniel Chapman	1847–48
Dr Alexander H Stevens	1848–49
Dr John C Warren	1849–50
Dr Reuben D Mussey	1850–51
Dr James Moultrie	1851–52
Dr Beverly R Wellford	1852–53
Dr Jonathan Knight	1853–54
Dr Charles A Pope	1854–55
Dr George B Wood	1855–56
Dr Zina Pitcher	1856–57
Dr Paul F Eve	1857–58
Dr Harvey Lindsley	1858–59
Dr Henry Miller	1859–60
Dr Eli Ives	1860–63
Dr Alden March	1863–64
Dr Nathan S Davis	1864
Dr Nathan S Davis, (held over)	1865
Dr D Humphreys Storer	1866
Dr Henry F Askew	1867
Dr Samuel D Gross	1868
Dr William O Baldwin	1869
Dr George Mendenhall	1870
Dr Alfred Stillé	1871
Dr D W Yandell	1872
Dr Thomas M Logan	1873
Dr Joseph M Toner	1874
Dr W K Bowling	1875
Dr J Marion Sims	1876
Dr Henry I Bowditch	1877
Dr T G Richardson	1878
Dr Theophilus Parvin	1879
Dr Lewis A Sayre	1880
Dr John T Hogden	1881
Dr J J Woodward	1882
Dr John L Atlee	1883
Dr Austin Flint	1884
Dr Henry F Campbell	1885
Dr William Brodie	1886
Dr E H Gregory	1887
Dr A Y P Garnett	1888
Dr W W Dawson	1889
Dr E M Moore	1890
Dr Wm T Briggs	1891
Dr Henry O Marcy	1892
Dr Hunter McGuire	1893
Dr James F Hibberd	1894
Dr Donald Maclean	1895
Dr R Beverly Cole[1]	1896
Dr Nicholas Senn	1897

SOCIETY NEWS

The Northwestern Ohio Medical Society held its fifty second meeting at Defiance, December 10 and 11 The following officers were elected President, Dr Joseph Sager of Celina, vice presidents, Drs James A Duncan of Toledo and R D Dihle of Lima, secretary, Dr J P Baker of Findlay, treasurer, Dr L M Gehrett of Deshler Dr J P Baker of Findlay read an elaborate paper on "Treatment of Diphtheria by Antitoxin," in which he reported twenty nine cases with the following results Number of cases treated with antitoxin 23, number of cases of laryngeal invasion 6, number of deaths 1, 9 cases received antitoxin first day, 4 the second day, 4 the third day, 2 the fourth day, 1 the fifth day, 1 case, stage of disease indefinite, 13 cases received one injection, 6 received two injections, 1 received three injections, 1 received four injections The antitoxin was supplemented by protonuclein combined with calomel enough the first day to act freely on the bowels Protonuclein special was blown into the throat and after third or fourth day a tonic of iron, strychnia and calisaya bark was given

Twelfth International Medical Congress—Claudius H Mastin, M D, of Mobile, Ala, has been requested, and has consented, to serve as one of the members of the American National Committee of the Twelfth International Medical Congress to be held in Moscow, Aug 19–26, 1897 The Central (Moscow) Executive Committee consists of the following gentlemen President, Prof I F Klein, vice president, Prof A J Kojewnikow treasurer, Prof N F Filatow, Secretary General, Prof W K Roth, Secretaries, Profs P I Diakonow, W A Tikhomirow and I I Hoyding, members, Profs S S Korsakow, J F Ognow and W D Chorwinsky It is officially announced that preparations are being made for the reduction of Transatlantic steamer and European railroad fares

A JACOBI, M D, Chairman Amer Nat Com

The Western Ophthalmological, Otological, Laryngological and Rhinological Association will meet in St Louis, Mo, the second Thursday and Friday of April, 1897, under the presidency of Dr Adolph Alt Physicians desiring to read papers are invited to send their subjects to secretary at once Railroads will give us one and one third fare on the certificate plan Programs will be mailed Feb 1, 1897 The profession are cordially invited to attend HAL FOSTER, M D, Sec

NEW INSTRUMENTS

A NEW OBSTETRIC FORCEPS

BY A B SPACH, M D

CHICAGO

Of the making of many instruments as well as "of the making of many books there is no end" This would appear especially true in the obstetric art, for there seems as many forceps as there are individual obstetricians However, the forceps herein described and delineated is believed to possess advan tages heretofore not brought out in any other instrument When it is considered that the primary object of the forceps is traction, Figure 1 will of itself indicate the merit claimed for this instrument

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[1] Inadvertently omitted in last publication

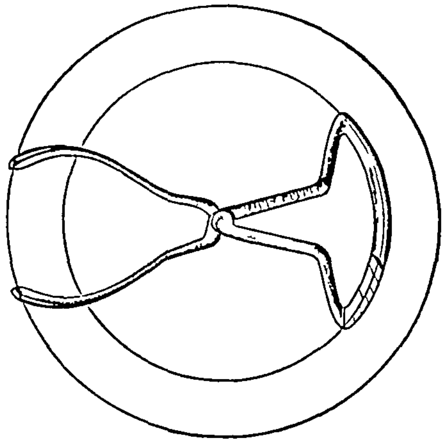

Figure 1

It will be observed that the lock is at the center of two equal circles (the outer circle in the figure is not to be considered in the description), of which the handles are arcs, and which, at any angle made by the blades while grasping the fetal head, constantly coincide (overlap) The lower arc is marked off in centimeters and inches, which continually measures the diameter of the fetal head This will enable the intelligent obstetrician to avoid making undue compression of the child's head

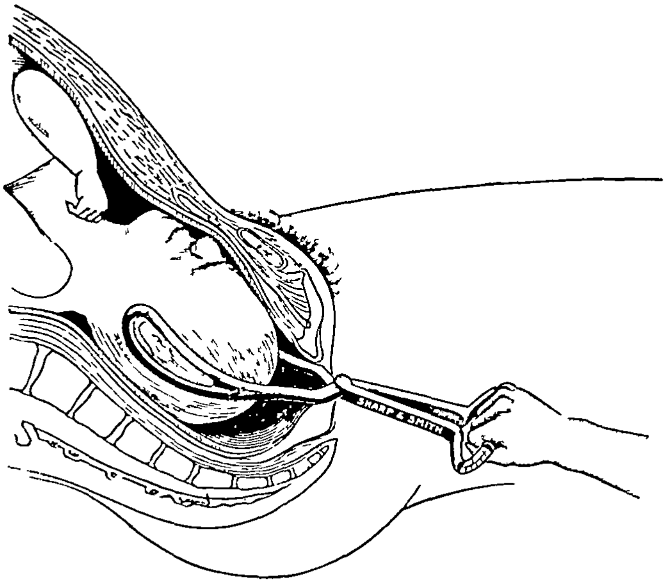

Figure 2

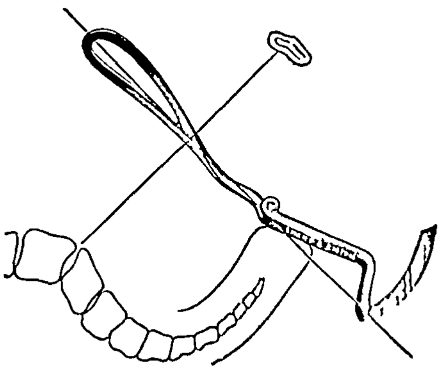

Figure 3

Figure 2 represents the forceps in [illegible] he [illegible] a recent employed in occipito posterior [illegible] when applied at the brim There are [illegible] ment is aseptable The two main advantages claimed, which are considered paramount, are traction and avoidance of undue compression of the fetal head There are some minor features relative to the lock and curve of the blades that are new

This instrument is manufactured by Sharp & Smith of Chicago

BOOK NOTICES

Twentieth Century Practice, an international encyclopedia of modern medical science by leading authorities of Europe and America Edited by Thos L Stedman, M D In twenty volumes Vol vii, Diseases of the Respiratory Organs and Blood and Functional Sexual Disorders 8vo Cl pp 796 New York Wm Wood & Co 1896

The contributors to this volume are Chas W Allen, M D, New York, Jules Comby, M D, Paris, C G Cumston, M D, Boston, E W Cushing, M D, Boston, James M French, M D, Cincinnati, E Fletcher Ingals, M D, Chicago, E Main, M D, Paris, Franz Riegel, M D, Giessen, Alfred Stengel, M D, Philadelphia, Herbert B Whitney, M D, Denver

The topics include, 1, diseases of the pleura, 2, asthma, 3, hay fever, 4, diseases of the mediastinum, 5, diseases of the diaphragm, 6, diseases of the blood, 7, rachitis, 8, disorders of menstruation, 9, functional disorders of the male sexual organs, 10, chemic and microscopic examination of the urine

The chapter on diseases of the diaphragm is by Dr Main, and the difficulties under which the author labors in meeting the task assigned him, are about as great as if he had been assigned to write upon the diseases and injuries of the deltoid or of the gluteus maximus However, the author frankly acknowledging the difficulties, has made a fairly readable article He speaks of the traumatic affections, but does not mention hernia, and he writes of rheumatism and neuralgia, but does not refer to the assaults of trichinæ, although, as is well known, the diaphragm is very frequently the seat of trichinosis The chapters by the other authors call for no special remarks, except to compliment them on making reliable and trustworthy articles on their respective topics This system, when complete, if the accomplished editor keeps up the standard thus far kept, will be at once our most exhaustive and most authoritative book on practice

The Medical Directory of the City of New York Published under the auspices of the Medical Society of the County of New York Price $1 00 New York Press of Richard Herrmann, 232 William Street 1896

This directory contains the usual list of physicians corrected to date, beside many matters of interest to physicians, compilations of medical laws relating to the practice of medicine and pharmacy, benevolent societies, asylums and homes, extracts from by laws of the Medical Society, etc

Essentials of Physical Diagnosis of the Thorax By Arthur M Corwin, M D, second edition, revised and enlarged Cloth, pp 199 Price $1 25 net Philadelphia W B Saunders, 1896 Chicago agent, W T Keener

This little book, originally intended as an aid in the instruction of his own classes, has grown into national favor Its scope has been somewhat extended, and practitioners wishing to refresh their memory on doubtful points in physical diagnosis of the diseases of the chest will find the work useful to them

A Pictorial Atlas of Skin Diseases and Syphilitic Affections In photo lithochromes from models in the museum of the Saint Louis Hospital, Paris, with explanatory woodcuts and text by Ernest Besnier, A Fournier, Tenneson, Hallopeau, Du[illegible]el and Henri F[illegible]d [illegible] Edited and annotated by J J [illegible] M B, F[illegible] v 4o, paper Philadelphia 18[illegible] gent, W T Keener

[illegible] ed with regularity and [illegible] on are 1 agminate [illegible] ernio (Tenneson), 3, papulo tuberculous syphilides (Hallopeau), 4, dermatitis vacciniformis infantilia (Hallopeau), 5, acute ecthyma of infancy (Hallopeau) The reproduction from the models in the Hôpital St Louis continue to bring their faithful pictures to the eye of the profession generally, and the explanatory text is as a personal guide, without which many of the lesions portrayed in the museum would be but imperfectly understood

NECROLOGY

Leonard J Sanford, M D, died in New Haven, Conn, December 12, after a cardiac illness of two weeks He was born in that city Nov 8, 1833, and was a graduate of Jefferson Medical College, class of 1854 He began practice in his native place one year afterwerd He received the honorary degree of M A from Yale in July, 1858, and was appointed professor of anatomy and physiology at Yale in May, 1863 Since that time he has given an annual course of lectures on these subjects, and also upon hygiene in the medical and other departments of the university

Charles N Woolley, M D, an ex president of the board of education in Newburg, N Y, died December 11, after a protracted illness, aged 58 years He was born in Southampton, N Y, was a graduate of Michigan University and ultimately of the Long Island Hospital Medical College in 1868

Guido Furman, M D, son of a Lutheran clergyman, born in Nassau, Germany, Jan 17, 1831, was a graduate in 1856 of the New York University Medical College He was elected in the earlier days Secretary of the American Medical Association, and subsequently held many positions in the medical societies and also appointments in the Sanitary Commission during the late war and in the New York Health Board He was in the enjoyment of a profitable practice until failing health compelled a resignation of his duties for some years before his death, which occurred December 2, at his home in New York city

Colin J Hackett, M D, died in LeMars, Iowa, aged 56 years, November 26 He was an alumnus of both the Medical College of Virginia (1860) and the New York University Medical College (1861) Beside being a member of the National Association of Railway Surgeons, he was long identified with the American Medical Association

Thomas A Foster, M D, Medical Director of the Union Mutual Life Insurance Co, of Maine, died November 27, aged 69 years He was a member of the class of 1856, Pennsylvania Medical College, Philadelphia

Charles S Flood, of Austin, Pa, died at his home November 27 He was a graduate of the Jefferson Medical College, class of 1887

MISCELLANY

Scarcity of Physicians in Cuba —There are only 51 physicians it seems for the 13,657 sick distributed in the hospitals, etc, throughout six provinces in Cuba, and the Inspector General has appealed to the Spanish Government for more, according to the *Bulletin Méd*, of November 11

Personal —Dr Howard Kelly of Johns Hopkins Hospital has returned from his European trip, much improved in health President Nicholas Senn of Chicago will spend the holidays hunting in the West Dr P O Hooper of Little Rock, Ark, has been appointed superintendent of the Arkansas State Insane Asylum Dr J R Pennington has resigned the Chair of Rectal Diseases in the Illinois Medical College, Chicago

Some Statistic Gleanings —In the Paris hospitals over 20 per cent of the typhoid cases prove fatal ——Shanghai, China, is almost free from cases of infantile convulsions ——Over 50 per cent of the cases of croup in Sweden and Norway are fatal ——One of every ten cases of sickness in England is due to rheumatism ——Mulhall says that in 10,000 deaths in Missouri 750 are from phthisis —Smallpox is more prevalent at Rome than in any other European city ——In the smallpox epidemic at Leipsic in 1871 the death rate from this cause rose to 12,700 per 1,000,000

Sensibility of the Eye to the Roentgen Ray —The Roentgen ray is invisible to the normal eye, but it has been found that ablation of the crystalline lens renders it visible A child upon whom this operation had been performed was submitted to the ray her head in a wooden box, on which the ray was directed from outside She saw nothing but darkness with the sound eye, but with the other the space was filled with light and she could see clearly through the walls of the box the outlines of objects without, that intercepted the ray, which presented to her view the aspect of the radiograph with which we are all so familiar —*Presse Méd*, November 15, from the *Rev Gén des Sciences*

Medical Aid for Cuba —The physicians of several of the cities in the United States having been aroused by reports of suffering in the Cuban papers, have started subscription lists to buy medicines, etc The movement was inaugurated by the physicians of St Paul A committee, consisting of Drs Kelly, Wheaton and Boeckmann, have raised several hundred dollars for this purpose It is expected, if necessary, that the supplies and medicines contributed can be sent under protection of the Red Cross Society, as no articles contraband of war will be sent

Surgeon extraordinary to Queen Victoria —Americans who are familiar with Bryant surgery, will be pleased to learn that Thomas Bryant, F R C S, has been appointed Surgeon extraordinary to Queen Victoria, the place being made vacant by the death of Sir John Erichsen Mr Bryant is very popular with the College of Surgeons, and has held all the important offices, those of examiner, vice president and president, the last named title being held by him for three successive terms At the present time Mr Bryant is the college representative on the general medical council and at the last election of the college council he was elected at the head of the poll

Indian Treatment of Smallpox —Incidentally an interesting historic fact is brought out in the land title case of Reynolds v Campling, wherein the supreme court of Colorado handed down a decision Sept 21, 1896 The plaintiff sought to prove the death in 1862 or 1863 of the patentee, one Armama Smith, an Indian woman, whom the defendant contended was still living in 1894 In the oral argument before the supreme court, the latter says counsel called attention to the evidence of death, which he urged occurred under such peculiar circumstances as to leave no doubt of the time being as stated These circumstances were as follows She was suffering from smallpox and that, when the fever arose, she ran and jumped into a stream of water, as was the custom of the Cheyenne Indians, and that her death followed immediately The court does not seem to doubt the correctness of the conclusion, if the premises are true, though it intimates that there may be some mistake as to the identity of the patentee, which can be cleared up on a new trial It may be stated here that this practice was not confined to the Cheyenne Indians, but was the common practice of most of the northwestern Indians

Relations Between the Motor Oculi and the Ciliary Ganglion —While it has been assumed that the ciliary ganglion belonged to the motor oculi nerve, as also its sympathetic nature, physiologic investigation has never established this beyond a doubt, which Apolant has now succeeded in accomplishing by the application of Marchi's method He experimented on young cats, as this ganglion is comparatively large in them, and the short ciliary nerves contain myelin He announces that the fibers entering the ganglion from the motor oculi nerve end there, with their terminals blending with the fibrils of the ganglion cells The motor oculi nerve was cut before its entrance into the sinus cavernosus and only young animals survived the operation They were killed from eight to fourteen days afterward, and the ganglion with the entire contents of the orbit, prepared and treated by the Marchi method The ganglion of the sound side was also treated in the same manner He never succeeded in tracing any of the degenerated fibers of the motor oculi past the ganglion to the periphery, consequently the cells of the ganglion are to be considered as the beginning of a new neuron The experiments also furnished the proof that the ganglion can not be spinal, as in that case the sectioned fibers of the motor oculi would have degenerated toward the nucleus and not toward the ganglion —*Cbl f Phys* , November 14

Influence of the Vagus on the Kidneys —A series of experiments described in the *Gazzetta d Osp e d Clin* of November 22, have demonstrated that the vagus plays an important part in the innervation of the kidneys, contrary to what has been hitherto assumed Section of the vagus on one side produced in animals marked renal disturbances and albuminuria The frequency of nervous manifestations in diabetes, the numerous observations of lesions in the vagus in diabetes, the probability of a nervous origin for the disease, the possibility of producing not merely glycosuria, but an actual experimental diabetes by lesions of the nerves, and particularly by lesions of the vagus, all of these facts incline Boeri to query whether the albuminuria of diabetics may not be referable to the vagus and whether the renal lesions in diabetes may not be interpreted as a degeneration of the renal epithelium, a trophic disturbance The albuminuria that accompanies a permanently slow pulse may also with all probability be ascribed to the vagus The slow pulse and the other symptoms may be concomitant symptoms of the lesion of the vagus, instead of, as Comby supposes, that the lesion of the vagus is due to degeneration caused by the slow pulse

Registration of Physicians in Massachusetts —Chapter 230 of the Massachusetts laws passed in 1896, provides that all applications for registration as physicians or surgeons under the provisions of chapter 458 of the acts of 1894, shall be made upon blanks to be furnished by the board of registration in medicine, and shall be signed and sworn to by the applicants It further requires that such board shall examine all applicants, and only such as are found qualified and shall give satisfactory proof of being twenty one years of age and of good moral character shall receive certificates of registration as provided in said act, provided, however, that said board shall register without examination any applicant whom it may find to be of good moral character, of more than sixty years of age, and a graduate of a generally chartered medical college having power to confer degrees in medicine, and who has been a practitioner of medicine in the commonwealth of Massachusetts for a period of ten years next prior to the passage of this act (which was approved April 1, 1896), and who otherwise complies with the provisions of this act Said board may by unanimous vote, after a hearing, revoke any certificate issued by it to, and cancel the registration of any person convicted of any crime in the practice of his professional business, or convicted of a felony Any person who shall practice medicine or surgery under a false or assumed name, or under a name other than that under which he is registered, or shall personate another practitioner of a like or different name, shall be punished by a fine of not less than one hundred dollars nor more than five hundred dollars for each offense, or by imprisonment in jail three months, or by both

Good Tenements that Pay —Dr E R L Gould of Johns Hopkins University says that "Of all the model tenement houses in cities of 100,000 and over in this country and the Old World, 88 per cent are on a paying basis" It is relatively a modern idea that works of benevolence should be made to pay The profits on them have generally been regarded as remote, if not contingent The riches they might be expected to bring in were not susceptible of deposit in banks, but must be laid up elsewhere to await the claimant The older idea has not wholly gone out, and never will, for all the scientific teaching of the time can not dispel the charm of free giving, even if the giving be practically useless and possibly harmful But the modern idea has in it, nevertheless, an element of common sense, developed by long and varied experience and pregnant with great good to society What is sought and got in the model tenement house may be said to be not charity, but beneficence, it does not simply relieve the suffering or allay the miseries of the poor, it aids directly and efficiently to remove the causes thereof and prevent their recurrence It makes permanent conditions of life not merely easier but better, by making the scant earnings of tenants go further and bring in more It promotes health and lengthens life by giving better air and light, and guarding against the sources of disease These things add to the wage earning power of the occupants of such dwellings The moral gain is not less important Apart from the demoralizing influence of dirt and crowding and discomfort, the unfit tenement saps self respect, weakens the resistance to temptation aggravates the evil passions and breeds the habit of unmanly and unwomanly conduct The good tenement does exactly the opposite —*New York Times*

"Homeopathy" and Venesection —Following the example of Hahnemann, whose powers of wandering from the hackneyed limits of the actual were unlimited, the average homeopathic fanatic perennially eulogizes homeopathy as the deliverer from venesection The fact is, however, that long before the homeopathic fungus sprouted, a current was setting in against the abuse of venesection Hahnemann assimilated quietly Storck's views concerning venesection without acknowledgment and distorted these just as he did other therapeutic stealings from Storck Hahnemann (Chronic Diseases, page 177) remarks "The homeopathist has dispensed with the necessity of employing the barbarous practice of bloodletting Beginners and learners may be pardoned for using depleting processes, but if they dare to pride themselves on their pretended improvements and promulgate bloodletting and cupping as processes that are entirely homeopathic, then they make themselves ridiculous They ought to be pitied for their dabbling and for their patients It is laziness, or is it a foolish predilection for the pernicious routine of allopathy which prevents them from making themselves acquainted with the true 'homeopathic' remedy?" The New York homeopathists adopted this system Dr Gray, one of their leaders, remarks (*Homeopathic Examiner*, vol iv, 845) "Bloodletting I have not ceased to employ during the eighteen years of my acquaintance with homeopathy at first by advice of my learned and lamented predecessor, Dr Gram, it was continued on purely empiric grounds, but now and for many years past I apply it upon the homeopathic basis, having acquired, partly by experiment partly by reading 'allopathic' authorities to that end, a tolerable pathogenesis of it"

Study of "Resultant Tones" and Their Acoustic Phenomena —The Helmholtz theory in regard to the resultant tones, as the tones are called which accompany the simultaneous sounding of two harmonious notes, the number of whose vibrations is equal to the difference between the vibrations of the two primaries scarcely explains them to our satisfaction, Meyer states in a recent article After proving what some deny, that such notes really exist, he asserts that overtones are not necessary to their formation, as he established by experiment in which he neutralized the overtones by interference He also found that two resultant tones can produce a new resultant tone (tuning

ir process are still unknown, but it is interesting to note in is fine illustrations how it is the nucleus in one and the pro oplasm in another that is first affected, all ending however n utter extinction, the complete dissolution of the corpuscle n the lymph plasma He considers the commencement of the rocess an indication of the death of the corpuscle As long s it retains its vitality it opposes a certain resistance to the ymph plasma This is extinguished with the death of the orpuscle and the plasma then destroys it Although we know that there is a constant destruction of the leucocytes oing on in the normally circulating lymph as in the blood, yet his destruction rapidly increases when it is removed from the ody, even when it is kept at the same temperature The umber of colorless corpuscles seen to be undergoing destruc ion then rises from 4 to 50 per cent The fourth process of dissolution is especially interesting The corpuscles swell and he small lymphocytes become transformed into large colorless orpuscles This explains the large number of leucocytes ound in lymph which has been removed from the body for any ength of time In reality they are nothing but the "dissolu ion forms" of the small lymphocytes, swollen to a large size

The British Law as to Unqualified Oculists and Aurists —An inter sting decision was rendered by the stipendiary magistrate at Leeds, Eng , Sept. 1, 1896, according to a report in the *Law Times* in a case wherein complaint had been made by the British Medical Defence Union that a Mr Thomas Ison had alsely described himself to be an oculist and aurist, implying hat he was registered as a medical practitioner under the Medical Act, and, moreover, that he had held himself out to he public to be by profession a surgeon under one of the pro isions of that act The magistrate dismissed the first part of he charges He said that the informant, the general secretary f the above society, had admitted on cross examination, that he had never known a qualified medical practitioner describes imself simply as an "oculist and aurist," those terms being enerally used by persons whom he designated as "quacks " This, in the magistrate's opinion, destroyed the whole fabric f the informant's case so far as the first point at issue was oncerned Nor did the magistrate think that the fact that he defendant called his place "The Leeds Eye and Ear Dis ensary," was a representation that he possessed a legal quali cation, as a surgeon, but only that he was an optician by rade, or an unqualified practitioner in the treatment of the ye and ear But Ison had affixed on a wall in the public treet a placard on which, under the arms of the city, were rinted the words, "Leeds Eye and Ear Dispensary, estab shed 1871, 52 Great George Street, Mr T Ison, oculist and urist," and on an inner door at Great George Street there was iscribed, "Consulting oculist and aurist " Furthermore, Ison uoted in his advertisements from paragraphs which had ppeared in the newspapers in praise of a previously existing haritable eye and ear infirmary The inference the magis rate irresistibly drew from these circumstances was that the Leeds Eye and Ear Dispensary" was a recognized medical nstitution and that the defendant himself was a recognized edical practitioner who had no regard for the unwritten law f the profession as to advertising, which, after all, the magis rate said, was a mere convention of no obligation—a rule of iquette Except for the references in the newspapers and on he walls to the "Leeds Eye and Ear Dispensary," he should robably have dismissed this second point in the case also, ut, with a view to the guidance of the defendant in the future, he magistrate imposed a fine of five pounds sterling and costs

Urea in Therapeutics —Urea taken internally in large doses, ten increases the diuresis and holds uric acid in solution These effects should ensure it a prominent position in thera eutics Its value has not been generally recognized hitherto, s the doses given have been too small to be effective Klemperer has been testing it extensively in large doses, and has found its action prompt and decided The best results were attained in cases of ascites and pleuritic effusions In a few cases of ascites with cirrhosis of the liver, the amount of urine rose to five liters in the twenty four hours, and large effusions in the abdomen rapidly disappeared He classified the cases he has been able to observe carefully 11 cases of ascites with cirrhosis of the liver, 63 per cent benefited , 7 cases of pleuritic effusion, 57 per cent benefited , valvular insufficiency, 13 cases, 38 per cent benefited , muscular cardiac troubles, 41 per cent benefited Bright's disease, 9 cases, none benefited It has no effect in diseases of the kidneys, which confirms again the physiologic assumption that the urea acts directly upon the renal epithelium, which it incites to stronger secretion Klemperer ascribes the varying results attained in cases of pleuritic effusion to pressure of the effusion upon the kidneys in the unsuccessful cases The results in heart troubles were also varying, probably from the same cause A few patients with severe compensation disturbances on whom all other remedies had proved unavailing, eliminated astounding quantities of urine and their extensive edema rapidly disappeared He refers these discrepancies again to the state of the kidneys, where they are too much degenerated by stagnation, the urea can not take hold. Albuminuria is therefore a contra indication to the use of urea, although there were cases in which it produced no effect even when the urine was free from albumin He recommends it in all cases of hydrops and ascites of non renal origin, when other remedies fail The effect is usually perceptible by the third or fourth day If there is no improvement by the fifth day, he advises its discontinuance The doses he administered were. Ureæ puræ 10 0, aq dest 200 One tablespoonful every hour If possible the entire amount to be taken in one day Two days later he prescribes 15 gm to 200 gm and two days later 20 gm to 200 gm It is almost always well supported by the patient If disagreeable to the taste he orders it to be taken in a wine glass of milk or Seltzer water He usually continues it for fourteen days, the total amounting to 200 to 250 gm. although in certain cases he has given more than this The largest amount, 920 gm in sixty five days, was in the case of a patient with chronic myocarditis He has also found it very effective in preventing the formation of renal calculi, supplementing the dietetic measures, etc He has administered it for this purpose in forty two cases, and in none has it failed to produce a marked favorable effect He begins as with hydrops, with a 5 per cent solution He also recommends a powder Natr bicarb , calc carb , ureæ pur āā 25 gm M f pulv In the forenoon and toward evening half a teaspoon This medication applies to patients who have just passed through a colic As a preventive measure he orders 100 to 150 gm urea The same regulations apply to patients who have formerly passed urates, and are now troubled by rheumatoid pains in the back and lumbar region Urea is unable to afford relief during a colic Its effect is also slight when the calculi are already formed, or when there is hematuria Its effect in gout is limited to increasing the diuresis His article in the *Deutsche Med Woch* , of November 19, concludes by quoting Senator's remark that the introduction of urea is a distinct gain to our pharmacopeia

Duty of Committee of Lunatic —Judge Clearwater, of the Ulster county court, N Y , does credit to his name in a decision he handed down Oct 14, 1896, in the case of Knapp's Estate He says that it is the paramount duty of the committee of a lunatic to attend to his or her personal wants and comforts, and to furnish him or her, so far as the funds in his hands will allow, with not only all the necessaries of life, but all the proper recreation and amusements consistent with his or her former habit of living It is his duty, likewise, to avail himself of medical advice, and all other reasonable means that may tend to the restoration of his ward or the amelioration of his or her condition The care, health and comfort of the lunatic alone are to be considered, and this without reference to the interests of the next of kin, heirs at law and expectants The maintenance of a lunatic is by no means limited to the amount of his or her income, but his or her whole estate may be expended for his or her support, should that become necessary A committee may arrange for the maintenance of the domestic establishment of a lunatic to the same extent as before the beginning of lunacy He may also provide for the payment of the lunatic's customary contributions to the church which the person had been in the habit of attending, and to the making of a proper allowance to the lunatic, to be expended by said lunatic for gifts to friends, servants, dependents or in charity The duties of the committee of a lunatic, and those of an executor or administrator, differ so widely that the rules governing the conduct of the one have but scant application to the duty of the other As before stated, the duty of a committee is to the lunatic alone, whose well being and comfort are of primary consideration, while executors and administrators are trustees for the benefit of creditors, legatees and next of kin, their duty being to conserve with great economy all the estate coming into their hands Causes are not infrequently brought to the attention of courts of justice, the judge goes on to say, in which a relative, who gave little attention to the living invalid when the latter was most in need of affectionate tenderness and care, proves the reverse of indifferent in efforts to obtain possession of an estate, with the creation and accumulation of which he or she had absolutely nothing to do This is an attitude which does not especially appeal to ourts of equity, nor is it apt to unduly influence them to be stute in the effort to discover evidence of misconduct in acts which are equally consistent with innocence

Gastric Ulcer with Perforation, Recovery —In the *London Lancet*, October 10, Dr Claude Taylor reports a case of the above nature as follows A male aged 50 years, with good previous history, had for a month or more had vague symptoms of gastritis, such as a little pain after food and occasionally slight sickness He had never vomited any blood, and having enjoyed such good health all his life he was unwilling to accept much in the way of advice or treatment On July 14 he had his dinner as usual at 1 o'clock, consisting of a mixed diet of meat, etc , and afterward returned to his work out of doors He was lifting barrels about, when at 4 o'clock he was suddenly seized with a violent pain in the epigastrium, which was so severe as to render him helpless, he was put to bed and poultices applied to the abdomen He brought up a quantity of green, bile stained vomit, but was only sick this once "As I was visiting in another direction when sent for, I did not see him till 9 o'clock that evening Then I found him pale and sweating, with the pulse somewhat quickened and the temperature slightly raised The epigastrium and right hypochondrium were the seat of great pain and tenderness, especially below the tip of the ninth rib The whole abdomen was very rigid At no time was anything of the nature of a tumor to be felt He had passed urine without much difficulty, and his bowels had been slightly moved Suspecting the real nature of the case I ordered that he should have nothing by the mouth and should continue the hot fomentations I saw him early next morning, when he said that he had slept fairly well and was feeling less collapsed, but the pain and tenderness remained, his temperature was 99 degrees F and the pulse was 72 At 8 30 P M the temperature was 101 degrees, the pulse 72, full and soft, and the tongue was a good deal coated and dry He had had two or three teaspoonfuls of weak milk in the afternoon by my direction as a test His bowels had been again moved, as I have mentioned there was no further vomiting The abdominal wall was less rigid and the pain was less severe, but diffused over the whole abdomen, the very tender area remained, but now the important sign of resonance over the liver area was present and I felt pretty confident of the diagnosis Thinking that an operation would probably be the only means of saving the patient's life, I consulted Dr George Findlay of Brailes on the matter, and he kindly came over to see him By this time it was midnight and the patient feeling better, being hardly persuaded that t matter was serious, we decided to wait till the morning a even then to postpone operation so long as the improveme was maintained I may say that the improvement did steadi continue, the pulse remained good but dropped to about 6 per minute the pyrexia subsided, and at the end of five day from the onset the resonance over the liver had disappear and the pain and tenderness nearly so I thought an absce would form, but there has been no sign of one I have recen seen the man and though he feels rather weak still he gets abo sees after his business to a certain extent, and except for som flatulence has no gastric symptoms Of course, he was fed entirely by the rectum, only moistening his mouth with a little water which he spat out again Enemata of milk and egg were injected every four hours and the rectum was irrigated once a day with plain alkalised water Though pepsin and hydrochloric acid had to be used for the enemata for the first three days (till I obtained some liquid pancreaticus from London) only one dose was rejected and the patient seemed to do well on them The mixture was allowed to digest for a full half hou and was then given him without being boiled, to allow peptonization to proceed in the bowel This, then, was a case in which, if it had occurred in a hospital I should have advised immediate operation according to the opinion at present held by at least many surgeons Operative measures, however, having failed in so many instances (three of which I have seen myself) the question arises What is the best method to pursue, and particularly should an attempt be made to sew up the ulcer immediately its perforation is diagnosed, or should one refrain so long as the patient seems to be getting better rather than worse? I submit this account as indicating that the last course may be the best, but the surgeon would hold himself ready to operate at once if the symptoms were progressive In my case I believe the absence of the necessity to move the patient more than a few yards after the onset had a considerable influence on his recovery "

Sea or Mountain Air Supplied at the Residence —According to the *Gaz d Osp e d Clin* of Nov 19, a new process invented by the chemist Linde compresses air until it contains 70 per cent oxygen instead of the usual 25 per cent A bottle of this a put up in the mountains or at the seashore will supply you a your residence with the healthiest and purest air in the world

THE PUBLIC SERVICE

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending Dec 19, 1896

Surgeon L B Baldwin, detached from the "Newark" and ordered to the "Puritan"

P A Surgeon S G Evans detached from the "Pinta" on reporting of his relief, and ordered to the naval hospital New York

P A Surgeon G Rothganger, detached from the "Patterson" Dec 25, and ordered to the "Pinta" per steamer of Dec 29

Change of Address

Rodgers D F from Ottawa Kan, to Rooms 416 418 Deardorf Building Kansas City, Mo

Taylor A D from Chicago to Williamsville Ill

Von Rehm, E, from 59 W 105th St to 1 W 106th St New York, N Y

LETTERS RECEIVED

Allport, Frank Minneapolis, Minn Alden, C H, Washington, D C, Abbey, C D Chicago Ill

Brown Bedford Alexandria, Va Biddle, J G Philadelphia Pa

Carter E C Fort Harrison Mont, Coe Henry W, Portland, Ore, Caldwell, W S, Freeport Ill

Elliott A R, New York N Y

Ferguson & Goodnow Chicago Ill Furay Charles E Chadron Neb

Munn & Co, New York, N Y Mountain Valley Springs Co, Hot Springs Ark

Pettingill & Co Boston, Mass

Richardson H Baltimore Md

Schering & Glatz New York N Y Sharpe, N W, St Louis Mo, Souchon Edmond New Orleans La

Woody, Samuel E, Louisville, Ky

therapeutics The details of his experiments and analyses are given in the *Bulletin of the Académie de Méd* October 27 They prove that the acts of oxidation are defensive processes of the organism in its struggle with bacteria, and therefore that the physician should favor in every possible way the absorption of oxygen in every infection, especially when there are typhoid complications He made a special study of the effect of cold baths on the chemistry of the respiration, which they greatly accelerate, but their chief value lies in the fact that they promote the absorption of oxygen To this he ascribes their marvelous effect in infective diseases, which he explains as follows Cold baths reduce the temperature by diminishing the acts of hydration and segmentation, the first stage in cellular disintegration, and of the production of certain toxins which are important sources of febrile elevation of temperature Cold baths also exaggerate the processes of oxidation, which transform the bacterian toxins and those which develop in the course of the morbid disintegration of the tissues into soluble products, easily eliminated and but slightly toxic They also increase the arterial tension, invigorate the action of the heart and increase the diuresis, thus facilitating the sweeping out and expulsion of the waste products These effects are accomplished through the mediation of reflex action on the nervous system, as is proved by the increased proportion of phosphoric acid in the urine to the total amount of nitrogen The larger amount of oxygen absorbed by the tissues while under the influence of cold baths, seems to be one of the means by which the economy promotes the processes of oxidation When cold baths do not promote respiratory changes, they are useless, and a chemical study of these changes will determine henceforth the cases in which they are beneficial and those in which they are not, which will prove an important factor in the prognosis

Experts Charged with Not Telling the Truth—In the personal injury case of Hall v Incorporated Town of Manson, which the supreme court of Iowa decided Oct 29, 1896, the plaintiff contended that by reason of a fall caused by the defendant's negligence several of the ligaments of the second and third toes were ruptured and her ankle severely sprained Several medical men testified for her that they had just measured her foot at various places, and her leg six inches above the ankle and found it considerably larger than the other foot At the point above the ankle they said that the leg was smaller than the other leg at the same point An equal number of doctors, who had just measured the injured foot at the same places, swore, for the defendant, that it was the same size as the other foot, except in the measurement of the leg above the ankle, which was one sixteenth of an inch larger than the other leg at the same point It will not admit of a doubt, says the supreme court, after making this statement, that this array of medical men were not all telling the truth Either the injured foot and leg were, at the points where measured, the same size as was the other foot and leg at corresponding points, or it was larger or smaller at some or all of said points of measurement Now, clearly, it continues, when such skilled men differ so radically touching a matter of mere measurement, as to which, it thinks, any number of men lacking in skill, but possessed of ordinary good sense, ought to substantially agree, because relating to a fact capable of exact ascertainment, it would be proper to resort to the practical plan of taking these measurements in the presence of the court and jury In other words, after expressing its opinion of the veracity of some of the experts in language admitting of no misunderstanding, the court lays it down as law that there is nothing indelicate in the measurement of a foot or arm or ankle in a proper case Yet in this connection the court hedges a little by stating that it does not hold that in all cases, as a matter of right, one party may require the injured party to expose the injured part of his person to the jury But when such exposure is in no way indelicate, and seems to be essential in order that the jury may be properly and correctly advised as to the material fact which is in dispute, it is not only the right of the court to order such exposure and examination or measurement of the injured part of the person on the request of a party, but its duty so to do Again, it says that while he would be a bold man who would assert that the evidence of experts is in all cases valueless, the testimony of medical men in this case touching these measurements, a matter not resting in opinion at all, but capable of physical demonstration, being in direct contradiction, is well calculated to shake one's faith in the reliability of experts Mr Justice Robinson, it should be added, vigorously dissents from what he styles the holding of the majority that the district court has no discretion, and that in all cases similar to this the defendant may, as a matter of right, require a woman whose injuries are in question to partially disrobe herself in the presence of the court, jury, members of the bar and possibly a court room full of bystanders, and raise her garments sufficiently high to permit each of the twelve jurors to see her legs measured six inches above the ankles, and this done even though other evidence is at the command of the defendant, and at hand, which may show that the exhibition is wholly unnecessary

Some Statistical Gleanings—Only 906 persons in 1,000,000 die of old age ——Twelve Englishmen in every 10,000 die of gout ——Of every 1,000 sailors 84 have rheumatism every year —— Epilepsy is most frequent in England, 51 deaths to 10,000 —— The death rate of the French army is 107 to 10,000 men every year ——Of every 10,000 deaths in St Johns, N F , 2,230 are of bronchitis ——Liability to death from heart disease is greatest between 30 and 40 ——There have been 196 visitations of the plague in Europe since 1500

THE PUBLIC SERVICES

Army Changes Official List of changes in the stations and duties of officers serving in the Medical Department, U S Army, from Dec 5 to 11 1896

Major William C Shannon, Surgeon (Fort Custer Mont), is granted leave of absence for one month on surgeon s certificate of disability with permission to leave the Dept of Dakota

First Lieut James M Kennedy, Asst Surgeon (Ft Missoula Mont) will proceed to Ft Custer Mont , and report for temporary duty at that post

First Lieut Paul F Straub Asst Surgeon (Angel Island Cal), is granted leave of absence for one month

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending Dec 12, 1896

Asst Surgeon H F Parrish resignation accepted from Jan 1 1897, Dec 9

Surgeon E H Marsteller ordered to the "Raleigh "

Surgeon H G Beyer, detached from the 'Raleigh" and ordered to the Newark "

P A Surgeon H B Fitts, detached from the ' Essex," ordered home and placed on waiting orders

P A Surgeon C D Brownell detached from the Puget Sound naval station and ordered to the Petrel" Dec 16

LETTERS RECEIVED

Alden C H Washington D C Alexander, L C Philadelphia, Pa., Allport, Frank, Minneapolis Minn

Bailey Wm Curtis Las Vegas N Mexico Baker, F C New York, N Y Bardon Fred Keokuk Iowa Beissel Dr Aachen Germany, Beman s General Newspaper Agency Ann Arbor Mich Brattain G E , Payne Ohio Burns R J Freeport Ill Burton H G San Diego Cal

Coale, R Dorsey Baltimore Md Colgan J F E , Philadelphia, Pa. Cullen G I Cincinnati Ohio

Dodds, F S Anna Ill Doherty David J , Chicago, Ill

Eichberg, L R New York N Y

Flint, Austin New York N Y

Gerhard, G S Ardmore Pa Gibbs M D , Hartford Mo Gottheil, Wm S (2) New York N Y Gould George M Philadelphia Pa

Hubbard G M Nashville Tenn Hummel, A L , (2) New York, N Y

Inglis David Detroit Mich

Jenkins J F Tecumseh Mich Jerry J A Chicago, Ill

Keen W W Philadelphia Pa Koechl, Victor & Co New York N Y,

Lippincott J B Co Philadelphia Pa Luckey, J E , Chicago, Ill

Medical Examiner The New York N Y

Noble H L Toledo Ohio Northwestern Christian Advocate The, Chicago Ill

Parke Davis & Co Detroit Mich Pollock, M D , Decatur Ill Prewitt T F St Louis Mo

Reed R Harvey (2) *Columbus Ohio, Ridlon, John, Chicago, Ill* Rohe George H Sykesville Md

Sattler Robert Cincinnati Ohio *Schering & Glatz* New York N Y Seibert W H Steelton Pa Stearns, Frederick & Co , Detroit, Mich Subscription News Co Chicago Ill

Victor Koech & Co New York N Y

Watson F A Keokuk Iowa Way J Howell Waynesville N C , Williams Chas Syracuse N Y , Wood, E S , Leavenworth, Kansas Wyckoff R M New York N Y

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ORIGINAL ARTICLES

THE AUTUMNAL FEVERS OF THE SOUTHERN ATLANTIC STATES AND THEIR TREATMENT

Read before the Pan American Medical Congress, Mexico, 1896

BY BEDFORD BROWN, M D
Ex President of the Southern Surgical and Gynecological Association
Ex President of the Medical Society of Virginia Honorary
Fellow of the Medical Society of the District of
Columbia Member of the AMERICAN
MEDICAL ASSOCIATION
ALEXANDRIA, VA

Fever of a malarial origin is an annual visitant, from August to the middle of October, of all that vast section comprised within the Southern Atlantic and Gulf States, and also of a large portion of the interior, comprising the Middle, Western and Southern States The large number of cases occurring within the vast area comprised within these borders, the distress of mind and body, the loss of time by sickness, the additional expense incurred, the impairment of health and the greatest of earthly evils, the mortality resulting, combine to render this one of the most important and interesting subjects in our profession, and how successfully to prevent malarial infection and to correct it after it enters the human system, become questions of paramount importance

While this subject has for years received the closest attention from scientific and practical minds, it never loses interest or grows trite and in all probability it never will

As already stated autumnal fever is an annual visitant in the eastern section of the United States and in certain cases passed under the name of malarial fever and in certain other cases under that of typhoid fever I find that this fever makes its appearance in our section about August 10 or 15 and continues to prevail until killing frost or freezing temperature begins and then it as suddenly disappears as it appears I find also among the profession and among the people that this fever in its simple uncomplicated state goes under the name of malarial fever, while in its complicated state and in its advanced stages it is denominated typhoid fever Hence, in all cases of malarial fever, characterized by symptoms of malignancy, as a dry tongue, delirium, jactitation, insomnia, tympanites, frequent pulse and general prostration are always miscalled typhoid, and by some typho-malarial fever These misnomers and misunderstandings of the proper character of autumnal fever are very misleading in relation to our proper conception of the treatment and management of the disease

In this fever which annually visits our section I do not believe that there is one case in twenty which is genuine typhoid or enteric fever, for these autumnal fevers, however they may in certain cases simulate true typhoid, disappear from our country at the first heavy frost, to return again at the next autumn This is not the course, or a part of the history of true typhoid fever Typhoid fever does not come in hot seasons and go in the cold, when frost and ice begin to make their appearance Typhoid fever does not come when the temperature goes up to 80 or 90 degrees and disappear when it goes down to 32 degrees But rather typhoid is a disease prevalent in low temperatures, in the late months of winter and early months of spring On the contrary, malaria thrives, flourishes and grows in high temperatures and moist seasons, in flat, low localities Typhoid fever has its favorite homes in high, cool localities in northern and mountainous sections

Etiology of autumnal fevers —The question of the origin of malaria, which is the true cause of our autumnal fevers, and of its peculiar nature, is now so well settled by scientific investigation it is unnecessary to discuss The plasmodium malariæ of Laveran, so clearly described by that careful investigator, its parasitic nature, its vegetable origin, its entrance into the circulation, its fastening itself on the red blood corpuscles as any other parasite, its growth and development in those corpuscles, its nourishment and sustenance on the material of the corpuscles, and finally its destruction of the red corpuscles, as any other parasite would do when fastened on an animal or vegetable body This destruction of the red corpuscles of the blood explains many, if not all, of the pathologic changes resulting from malaria, as organic changes in the liver, spleen, blood and venous tissues It explains the chills, the fevers, the congestions and irregularities of circulation of malarial fever The circulation can not pursue its regular course through the round of the vascular system with disorganized, broken down blood corpuscles They lodge somewhere in the capillaries and cause local congestion in the lungs, liver, spleen or brain This is the true secret of those terrible congestive or pernicious fevers found in malarial regions The corpuscles of the blood have been either partially or wholly disorganized and are unfit for circulation through the capillaries The fever that follows the chill is a bold and determined effort of nature to assert itself and relieve a congested circulation The chill is a partial cessation or suspension of circulation from partially disorganized blood structure The fever that follows is necessary to correct that suspension and restore the equilibrium If there was no fever to follow the chill of malarial fever, the circulation in its integrity and equality could never be restored and in every case there would remain local congestions of the great central organs as the brain, liver, lungs, spleen, that would inevitably produce disorganization of that organ and certain death The pernicious fever is an example in point Here there is no reaction, or only a partial reaction, and the result is almost certain death After the seven days' battle around Richmond, in 1862, I saw cases of this fever, contracted in the Chicahominy swamps, die within fifteen hours after the first chill

The plasmodium malariæ of Laveran is probably the most certain diagnostic of malaria when found in the blood

Another very interesting question in this connection is the channel through which the malarial plasmodium is carried and conveyed into the system, whether through the atmosphere, or water, or both Formerly it was the professional opinion that the air was the channel through which it was conveyed At present the trend of professional opinion tends to the view that water is the principal channel Experiments instituted by many observers in many localities go to show that water certainly is a common carrier of the malarial parasite These experiments show that in malarial regions persons using surface water, as that of spring or wells or streams, are exceedingly subject to malarial poisoning, while the same persons when made to use water from the deep reservoirs of the earth, as for instance from artesian wells, are entirely free of all malarial infection In other words, that it is the water from the earth's surface saturated with the debris of vegetable decomposition that contains and carries the malarial parasite

The importance of these facts elicited by scientific investigation can not be overestimated in a sanitary point of view But I must think that there is certainly some truth also in the idea that was entertained for so long a time, that the air is a carrier of malaria

I believe that there is some ground for the opinion that there are different forms of the plasmodium malariæ to account for the different types of malarial fever and that these different types of disease are not simply due to a difference in quantity of the dose

Forms of malarial fever —The time honored division of malarial fever into three distinct forms of the disease, the intermittent, remittent and pernicious or congestive, still holds good But there is a subdivision of the remittent form into two distinct types, the acute, sudden and violent, and the slow, progressive and insidious type

This division of the remittent form into two distinct types I consider of so much importance that I shall, when I come to consider that form, dwell upon it at some length

Intermittent fever or fever and ague —Fever and ague usually runs a distinct course, and is rarely disposed to run into the remittent At certain seasons it becomes unusually prevalent in the section of the Southern Atlantic States Then again it may disappear and scarcely be seen for several years

It is rarely seen in the thickly settled or central portions of towns and cities or thickly populated, well watered, and well drained countries Its favorite localities are the suburbs of towns, low, swampy regions, supplied with bad drinking water from shallow wells, springs and streams containing vegetable matter Persons using boiled water, cistern water, artesian water, or well filtered water rarely suffer, if at all, from fever and ague

The plasmodium of fever and ague appear to have a positive tendency to infect the liver and spleen And it is after a time very certain to fasten itself on the red corpuscles of the blood The habitual subject of fever and ague ever presents an appearance highly characteristic of the disease The complexion at once combines the jaundiced appearance of hepatic disease, and the extreme pallor of profound anemia, showing the poisonous action of malaria on the structure of the liver and at the same time the disorganizing action of the plasmodium on the blood corpuscles Thus we have in these cases a combination of jaundice and anemia

There is a peculiarity about fever and ague that has never been accounted for, which differs entirely from the remittent and that is a constant tendency to recur, even long after the subject has ceased to reside in a malarial region The question is, does he get a new dose of the poison, or does the malarial germs possess the power of generation and multiplication within the system, similar to other ferments and spores? I myself take the latter view of the case Otherwise I do not see how this peculiarity can be accounted for

The acute type of remittent malarial fever —The acute form of malarial fever begins suddenly while the patient is in his usual health It has no premonitory symptoms The victim may be in a perfect state of health and be stricken down within a few minutes It is almost invariably ushered in by a distinct chill or chilliness The temperature after reaction begins, rises rapidly, advancing to 103 or 104 degrees, even to 105 degrees within a few hours Then in the course of ten or twelve hours remission commences There is a diurnal rhythmic movement of fever In all of these malarial fevers, there will be observed a rhythmic element except the pernicious, in which it is absent

In pernicious fevers there is no well defined or regular rhythmic movement in febrile action whatever Rhythm in fever is a conservative action and an effort of safety and is designed on the part of nature as a protective measure to the patient It is an alternation of rise and fall of corporeal temperature, solely brought about by the conservative forces of nature Deprived of this rhythmical tendency in fever we would either have a continual high temperature or low temperature In our treatment of fever we attempt to imitate the rhythmic action of nature by medical agencies *Chill in fever is a partial* suspension of nerve force by the action of certain poisons on the blood and tissue, whether from malaria, sepsis or other causes, in which the circulation is partially and in fatal cases wholly suspended, and for the time the blood-making and heat-generating powers are also in partial suspense Chill, whether slight or grave, means blood poisoning The fever that follows, which we term *reaction*, is an effort of nature to restore nervous and circulatory action and throw off the offending cause and is therefore a conservative movement. The chill, the fever and remission, constitute the rhythmic movement of malarial fever, and when we see in our cases of malarial fever this rhythmic action carried out in perfection, we prognosticate a favorable result But when on the contrary we observe an absence of regular rhythmic action in our cases we argue unfavorable result, provided we can not restore the rhythm of fever by artificial means Rhythmic movement of temperature is peculiarly characteristic of malarial fevers and is generally known under the term periodicity But it is not confined to those forms of fevers We see it in typhoid to a certain extent, but much less defined We see it clearly defined in hectic and pyemic fever Here it is again evidence of a poison acting on the blood, depressing the nervous system to an extreme degree, lowering the temperature and reducing the circulation, which we term a chill Then follows febrile reaction, which is a vain effort of nature to reassert itself and throw off the effects of blood poisoning, and failing in this then comes the copious perspiration in the further vain effort to get rid of the poison, and finally comes after all this the blessed calm of remission, when the rhythm of fever for a time has been accomplished, with its delightful sensations of relief from the torture and suffering of fever

Prolonged malarial fever —This is a distinct type from the acute form of malarial fever It differs in having a well marked, well defined premonitory stage, which the other has not This premonitory stage may be developing for a week or more and consists in general sensations of malaise There is impairment of appetite, some daily headache, some painful sensations in the back and limbs These symptoms are particulary apt to return toward evening The victim always feels more or less relief in the morning Toward night if the pulse and temperature are tested it will be found that they are slightly above, the pulse may rise to 85 and the temperature to 99 5 degrees Nevertheless the patient continues to be up and about, though he feels there is a loss of physical strength and mental activity, and that he is incapable of much exertion Toward evening the patient has sensations of chilliness There is rarely diarrhea present

These prodromic symptoms resemble very decidedly those of typhoid fever, except that of diarrhea, which is almost invariably present in the latter But if closely observed it will be found that the prodromic symptoms of prolonged malarial fever increase in severity daily until the full development of the case There is a daily but very slight increase of temperature and pulse rate, while the patient grows weaker and more indisposed to exertion of any kind

Finally, there is entire loss of appetite, then there is an evening chilliness and fever, and toward morning a remission, when the patient feels better and stronger during the morning, but as certain as evening approaches there is a return of chilliness, feverishness and decline of strength It will be observed that at this early stage the rhythm of fever is present and this is characteristic of this fever until it reaches the adynamic stage, when the type of fever assumes a more continuous form and loses the rhythmic character I regard a proper conception and knowledge of the prolonged form of malarial fever as of exceeding importance, as it is often confounded with genuine typhoid fever A mistake of this kind is exceedingly unfortunate, as the treatment of the two diseases is entirely distinct

At the meeting of the Pan-American Medical Congress held in the City of Washington, some years ago, a most instructive and interesting paper was read by Dr Lobos of Carraccas in Venezuela, on the subject of "Prolonged Malarial Fever" as observed by him in the Tropics, where typhoid is rarely found

He states that this type of malarial fever, which he regarded as a distinct form, prevailed annually in his section of Central America The development and progress of the disease are so graphically described by him were eminently slow It is a fever, while characterized by frequent changes, subject to extreme exacerbation and extreme increase and decline of temperature, often continues for three or four months

The prolonged malarial remittent fever of our Southern Atlantic States, as witnessed by me for many years past, has three distinct stages, the premonitory preceding the development of fever, the simple febrile stage and finally the true adynamic stage This is the form of fever we so commonly meet with from July to October in our Southern States, which prevails annually during that period and suddenly disappears when the temperature falls to 32 degrees

The curves of temperature in the acute and prolonged forms differs widely In the acute they are sudden, sharp, abrupt and extreme In the prolonged forms they are slight, gentle, moderate and never sudden, sharp or abrupt The rise of temperature is gradual and slow and never reaches suddenly a high point In neglected or improperly treated cases there is a gradual increase daily in temperature until the case reaches the true adynamic stage, when it may attain 105 or 106 degrees But these high degrees are never attained in the early stages of prolonged fever, but only in the advanced or adynamic

The premonitory stage —The premonitory stage is characterized by a decline in physical strength and mental activity The victim suffers from languor of mind and body There is a decline correspondingly in appetite There are neuralgic pains in the limbs, back and head, due to the action of malarial poison on the great nervous centers, the brain and spinal cord

The premonitory stage of prolonged malarial fever is always characterized by neuralgic manifestations, and these neuralgic symptoms bear out the rhythmic habits of malarial disease They have their exacerbations and remissions with much regularity These neuralgias of the premonitory stage of malarial fever are not infrequently mistaken for muscular rheumatism, the effects of cold or simple neuralgic pains In this stage neuralgic symptoms are often of so marked a character as to obscure all other morbid indications They may appear in the head, neck, back and limbs From an early period the poison of malaria makes a marked impression on the sensitive centers of the spinal cord Its effects on these centers is to produce a state of hyperesthesia or increased sensibility running into neuralgic forms Whereas the poison of typhoid exerts a contrary effect by producing rather a state of anesthesia of the nervous centers Nervous sensibility in typhoid is always impaired, blunted and below par Hence the poison of typhoid exerts a marked sedative on the brain and spinal cord The premonitory stage of prolonged remittent fever usually continues from five to ten days before the development of the febrile stage

Secondary or febrile stage —The appearance of chilliness and fever decides the import of the premonitory symptoms It decides that they are the prevailing symptoms that usher in an attack of fever Fever of this type is rarely ushered in by a decided or marked chill, but rather by chilliness at evening Following this chilliness there is a slight rise of temperature, at first usually 100 or 101 degrees Toward morning this declines to 99 or 99 5 degrees For a week or ten days there is an evening chilliness, then a slight rise of temperature, continuing during the night, which declines toward morning This is the true rhythm of fever constituting exacerbations and remissions The curves of temperature at this stage are never abrupt, sharp or extreme, but gentle gradual and slight The rise will rarely exceed 102 degrees or the fall decline to 99 5 degrees

The simple febrile stage, if unrestrained, about the third week usually begins to assume a decidedly aggravated form Then during the febrile exacerbations the temperature rises, the pulse becomes more frequent, the tongue dryer, the appetite is lost, the sleep is disturbed and less refreshing, the mental powers are less clear These symptoms all denote the approach of the adynamic stage This is the stage of mortality in prolonged malarial fever I have never known a case to terminate fatally in the simple, uncomplicated febrile stage This is the stage in which question of the life or death of the patient are to be determined The case must reach and pass into the adynamic stage before a fatal termination Hence the infinite importance of averting this stage So long as we can avert the adynamic stage our patient is safe Insomnia, restlessness and delirium constitute early indications of adynamia, that should enlist our attention In adynamia the blood and nervous system are profoundly affected, there are degenerative actions at work in both, calculated to destroy life I am persuaded the great system of sympathetic and vasomotor nerves participate in this degenerative action, which explains many of the morbid phenomena of circulatory irregularities of fever

In the adynamic stage the rhythmic movements grow less and less daily and are less defined The febrile type gradually loses the remittent form and assumes the continued Delirium becomes a constant feature The rest of the patient is seriously impaired and marked insomnia sets in The tongue becomes dry, crusty, red or dark brown In place of tympanites there is often retraction of the abdominal walls and in very protracted cases the spinal column may be detected through the abdomen The pulse increases in frequency and the temperature from 104 to 105 degrees By the end of the fourth week the temperature will range at about 105 degrees, and the pulse rate at 125 or 130 Hence the extent and gravity of adynamia in this form indicate the degree of degenerative action in the blood and tissues After the adynamic stage sets in then recovery can only take place after such changes or their effects have been repaired by nature It is this stage of adynamia which all cases of prolonged malarial fever when neglected or ill treated pass through, that induces the belief in many that it is true typhoid fever, while others regard it as a combination of typhoid and malarial fever or what is termed by many typho-malarial fever, which is evidently a misnomer, as there is no such disease

It is simply a case of prolonged malarial fever that has passed into the adynamic stage

The habitat of prolonged malarial fever —As we advance from the more temperate climates toward the warm and tropical regions this form of disease becomes more prevalent, until we reach a point where it is the endemic of the country, and this is in the region of the Central American States Dr Lobos tell us in his very interesting paper that it is endemic in Venezuela, and as witnessed by him it assumes a very protracted form, often continuing three or four months The idea which I desire to inculcate here is that as we advance toward the tropics, the tendency to the prolonged form increases until we reach a point where the protracted form is the prevailing type of malarial disease

In the Southern Atlantic States the disease usually runs a course of from three to six weeks In the tropics from three to four months, according to Dr Lobos

Pernicious or congestive fever —This form of fever is not infrequently seen in the lower Atlantic and Gulf States during the autumn months It is noted for the suddenness of its onset, the rapidity of its course and termination Its chief characteristics are sudden chill protracted over many hours, either without reaction or followed by very imperfect reaction In this imperfect reaction the head and body may be intensely hot while the extremities have the coolness of death I have seen cases of this fever in which the extremities and surface were icy cold, while the thermometer in the rectum denoted 106 5 degrees

Malarial coma is a frequent feature of these cases The pupils are widely dilated, the tongue is cold and very pallid In some cases there is intense nausea and vomiting At times the pulse is slow, at others rapid and very feeble The cardiac sounds are very indistinct and scarcely audible Hematuria is not an infrequent symptom, and albumin is often found in the urine

The degree of malignancy of pernicious fever must be regarded as the measure of the extent to which the corpuscles of the blood have been disorganized or destroyed by the plasmodium malariæ It is difficult to say what proportion of these corpuscles may be disorganized without producing fatal results, whether a fourth or a third or a half But in pernicious fever a very large proportion of blood corpuscles must speedily be rendered unfit for circulation and purposes of life It is altogether probable that the peculiar phenomena of this fever are due to this pathologic fact The prolonged chill, the extreme reduction of temperature, the imperfect reaction, and finally the intense and extensive congestion of the internal organs, are all due to the fact that the blood corpuscles to a large extent have been disorganized by the malarial parasite or have lost their amebic characteristics and find fixed lodgment in the capillaries of the internal organs, as the lungs, liver and spleen, and in these organs cause irremediable congestion In those cases where reaction and restoration took place, what becomes of the débris of those broken down corpuscles is an interesting question They exist in the congested organs as effete material that must be gotten rid of before there can be a restoration to health To convert this effete matter into new forms, fitting it for elimination from the system, becomes the work of that potent agent, oxygen By the action of this wonderful agent, the débris of broken down corpuscles is converted into urea, uric acid, creatin and creatinin, forms perfectly adapted for elimination by the renal organs

True congestive fever, like cholera, is a disease rapid in its incipiency, rapid in its onset, rapid in its course and sudden in its termination when fatal, and treatment, to avail anything, must be prompt, as every minute counts for much in arresting its progress A marked feature in pernicious congestive fever is malarial coma This symptom usually sets in when the algid stage is at its climax It is often impossible to arouse the patient The pupil refuses to respond to light The powers of sensation are often lost You may handle many of these patients rudely and roughly, you may prick them with a sharp instrument, and the nervous system fails to respond The nervous centers are profoundly intoxicated with the malarial poison Yet the coma of malaria resembles neither the coma of apoplexy or of uremia It is wanting in the stertorous breathing and hemiplegic symptoms of the former and the convulsive features of the latter. The patient is in an apparent profound, quiet sleep. The breathing is slow and labored.

The prognosis of pernicious congestive fever is always bad. A certain proportion of these cases die and never react, after the first chill. Another proportion die during the second and third chill. But as a rule, these latter cases never fairly and fully react. If the patient only partially reacts after the first chill and suffers a second chill, he generally succumbs in the second. In many of these cases such is the extent of disorganization of blood corpuscles from the first onset, the case is fatal from the beginning and is beyond the reach of remedies.

The rate of mortality is always very high. It ranges from 30 to 60 per cent.

Differentiation between the symptoms of typhoid and prolonged malarial fever.—In differentiating between the symptoms of the two diseases, the curves in the temperature of the two forms are really almost if not in perfect resemblance. The prodromic symptoms, while alike in some particulars, are dissimilar in others.

During the prodromic stage of prolonged malarial fever there are always present decided neuralgic features common to malarial poisoning. These are almost invariably absent in typhoid fever.

In typhoid, diarrhea is invariably present. In malarial fever the opposite is usually the case. In typhoid fever there can usually be detected on pressure in the right iliac region, distinct gurgling. The rose-colored eruption over the abdomen is usually present in typhoid, and absent in malarial fever. Tympanites is invariably present in the second stage of typhoid and absent in malarial fever. In the latter a state of retraction of the abdominal walls usually exists throughout its progress. Hemorrhage is a not infrequent occurrence in typhoid fever, and is never present in malarial fever.

But the most characteristic difference is found in the presence of the malarial parasite. The presence of this body at once is sufficient to determine the nature of the case.

It will not do in these cases to depend upon the curves of temperature as a means of differentiation. I see cases of prolonged malarial fever every season in which these curves resemble perfectly those of typhoid. They possess all their gentleness, their slightness, their evenness, slowness, similar to typhoid fever. They have none of the sharpness, suddenness, abruptness or extreme character of acute malarial fever. The rise and fall of temperature is moderate, never sudden, abrupt or extreme throughout. In this way the curves of temperature in the prolonged variety are often deceptive and misleading.

A large majority of medical men of my acquaintance, as a matter of differentiation between prolonged malarial fever and typhoid depend largely on the character of the curves of temperature.

Another feature very much depended on for diagnosis is the continued form of fever assumed by malarial fever in the adynamic stage. These are all deceptive and fallacious tests. I regard the proper differentiation between the prolonged form of malarial fever and typhoid as a matter of infinite importance, as the treatment of the two diseases is entirely distinct, and as a question that can only be settled by the microscope.

TREATMENT OF AUTUMNAL FEVERS.

I know of no subject in the practice of medicine, with the exception of typhoid fever or tubercular phthisis, of more importance and that merits our careful and scientific consideration more closely than that of the treatment of the autumnal fevers of our country. These forms are not only an annual visitant of the Atlantic States of the South, but their visitation always brings distress, trouble, suffering and too often death, and may ever be regarded in the light of a calamity.

Prophylaxis.—It is conceded by all authorities that malaria enters the human system either by means of the air we breathe or the water we drink, or through both of the channels. For many years it was the accepted opinion that the air was the only common carrier of malaria. More recently carefully conducted experiments go to prove that water is the true carrier of malaria. If this be true it is obvious that we have at hand a far greater command of the situation in instituting measures for the protection of the human system against malarial poisoning. Frost and malaria are deadly enemies. When water sinks in its temperature to 32 degrees F. all malarial germination and life ceases, and after that water in the most malarial districts may be imbibed with impunity. Our water supply, according to the latest and most reliable scientific experiments, is to be the field of future hygienic investigation and operation in regard to the question of malaria and its entrance into the human system. Formerly drainage, the clearing up of swamp lands, tillage and improvement of the soil were the only hope of those residing in malarial districts. Since the discovery that water, if not the chief, is a common carrier of malaria, another and a renewed hope has arisen for those who are yearly subject to malarial influences and that hope lies in a supply of purified water. If this be true, and all the evidences point in that direction, those who reside in the most deadly malarial districts may not despair, for by a little expense and not much labor, they can command the situation. It is very well established that malarial infected water is confined to that on or near the surface of the earth. The deep reservoirs of the earth, which can only be penetrated by artesian wells, are free from malaria. But the expense of this resource renders it impracticable in many sections. But a resource available for the poorest and humblest in malarial regions is that of *sterilized water*, which has been subjected to the boiling point. But sterilized water, while its malarial parasites have been killed by the action of heat, nevertheless contains a certain amount of dead organic matter. From this objectionable element sterilized water can be made free by filtration.

Certain products of cinchona undoubtedly possess prophylactic power in addition to their curative properties. Quinin, its most important product, must be regarded, in addition to its multiplicity of medicinal properties, as an antidote to the malarial poison. And it has a claim to be ranked among the chemic antidotes. It arrests fungoid generation and growth by arresting all fermentative action in the blood. If the article quinin possesses the chemic property of accomplishing these objects it is entitled to be ranked among the antidotes for fungoid growth and fermentative action in the blood.

Its well-known antipyretic powers in fevers are no doubt due to its remarkable antifermentative action.

But regardless of all theory on the subject, wellattested experiments in its use as a prophylactic in all malarial regions, as the Southern Atlantic and Gulf States, East and West Indies, have established beyond a doubt its prophylactic powers Ten grains of the bisulphate taken in a glass of sherry wine before breakfast and previous to all exposure, when combined with the systematic use of sterilized water will ensure protection

I think in filtered sterilized water we have the ideal non-malarial drinking water for common use by residents of malarial districts when other resources, as artesian wells, are impracticable However much water may be impregnated with the malarial parasite, in sterilization and filtration we have a certain means of purifying it and rendering it fit for human use By the process of sterilization the vitality of the parasite is destroyed But that does not remove the dead organic remains from the water That can only be accomplished by a thorough process of filtration Hence safety lies in a combination of sterilization and filtration

The rate of mortality in the prolonged form of malarial fever or the so-called typho-malarial fever, is about equal to that of true typhoid fever The rate of mortality of pernicious congestive fever is very high It not infrequently reaches 50 or 60 per cent

In the treatment of these diseases the important question arises, can we by any known means modify the types of these fevers, by rendering them milder, and at the same time reduce their rate of mortality?

These are questions of paramount importance I believe that by proper treatment these objects can be accomplished

Quinin is the only certain and acknowedged antidote to the parasite of malaria

But its efficiency as such depends absolutely upon the manner of its administration Given according to rules it is a remedy of great precision Given according to other methods it is entirely insufficient There is much in the manner of giving remedies, and even the most valuable and potent may fail if given without proper method or system

Forty years ago it was the custom to give quinin in malarial fever in doses of one grain every hour, or two grains every two hours, or three grains every three hours Well do I remember the utter inefficiency of the remedy in modifying the type or reducing the rate of mortality By this method the system failed to get sufficient of the antidote to destroy the parasite In giving this antidote it becomes somewhat a question of mathematical calculation We must gauge the quantity of our antidote to the amount of parasite in the system and the gravity of the case Not only this, but the remedy should be given in large doses at longer intervals, rather than in small doses at shorter intervals Thirty grains given in ten-grain doses three times a day is far more efficient in the remittent forms of fever than the same quantity given in two grain doses every two hours Twelve-grain doses morning and evening act more decidedly than twenty-four grains divided into broken doses every two hours In decided forms of fever quinin should never be given in small doses, however often repeated I have repeatedly seen cases in which one or two grains were given every one or two hours, without the least effect, when the same quantity per diem given in three equal parts three times a day changed the entire aspect of the case promptly

For many years I have taken every opportunity to experiment with quinin in malarial fevers with a view of ascertaining in each form and stage of fever the quantity of quinin that was necessary to act as a destructive antidote to the malarial parasite

I found by experiment that in the treatment of intermittent fever fifty grains (gm 3) of quinin given within thirty-six hours preceding the chill, was the maximum quantity required to arrest the disease Thirty grains (gm 1 80) given within twenty-four hours preceding the chill in a majority of cases would arrrest it, but not invariably I found that five grains (gm 30) of acetanilid given just before the chill invariably modified the chill and resulting fever In regard to chronic chill and fever, I found 10 grains (gm 60) of quinin given in sherry wine before breakfast and Warburg's tincture in full doses after dinner and supper, almost invariably acted as preventives

Quinin should never be given in pill form as they are slow to dissolve and frequently do not dissolve in the stomach at all It is preferable to give it in solution or powder as the bisulphate, or lastly in fresh capsules I am satisfied that a certain proportion of cases are lost because of the insolubility of pills I have repeatedly seen in my practice cases grow worse daily under the use of the quinin pill, that improved rapidly when the solution or powder was substituted Then again in cases of great emergency where we desire prompt action, in my experience, the bisulphate is the most certain form in which it can be given

In the application of this remedy as an antidote to the malarial plasmodium, we must be governed by fixed laws and practical rules, or failure will be the result

It is certainly true that we have all grades and types of malarial disease from the mildest to the most malignant, and we must adapt our measures to these different grades or we can not have success I found in my experience in the past thirty years, in about one hundred and seventy-five cases of malarial fever beginning suddenly, with a decided chill and followed by a temperature running up rapidly to 105 or 106 degrees, with intense neuralgic pains, 60 grains (gm 3 60) of quinin per day of twenty-four hours given in divided doses of 10 grains (60) every four hours would invariably arrest the attack in seventy-two hours and frequently less time Thirty grains per day would prolong the attack to five or six days, especially if given in three grain doses every two hours Twenty grains (gm 1 20) per day would prolong the attack between one and two weeks, and 15 (90) per day would prolong it from three to four weeks

These facts teach us the important lesson, that to obtain the full antidotal effects of quinin, we must saturate the system with the remedial agent promptly in quantities sufficient to kill every malarial germ in the system Otherwise if a single germ is left in a living state it becomes the nucleus for rapid germination and multiplication, and our work must be done over again

The question arises whether in these violent types of high temperature, we have any means at hand to facilitate or promote the action of quinin I can answer this question emphatically in the affirmative I find that during the febrile exacerbation when the temperature is high, the skin is very dry, the pulse frequent, 5 grs (30) of phenacetin, and 3 (18) of acetanilid given every two hours act charmingly in lowering temperature composing excitement, and inducing perspiration and in this way aiding the action of quinin Then there is the additional means of sponging the surface with cold water and alcohol But in those cases of hyperpyrexia with a temperature of 106 or 107 degrees threatening a speedy termination of life the cold poultice enveloping the chest abdomen and spine, and changed every two or three hours has done me most excellent service Then we have in this class of cases numerous and valuable resources in aiding and facilitating the action of quinin in doing its work

Next in order to be considered is the treatment of the prolonged variety of malarial fever

The prolonged form of malarial fever, if neglected or improperly treated, is certain about the third or fourth week to pass into the adynamic stage

The questions arising in treating this form of fever are, whether its type can be modified, its progress curtailed, and the adynamic stage be averted

I can with the utmost certainty answer this question in the affirmative But in our treatment we have persistent disease to contend with, and our treatment must be systematic, constant and active, and as sure as we lapse into an expectant method or relax our efforts, the progress of the case gains on us every hour and it will pass into the adynamic stage, there will be increase of temperature, of pulse rate, and the rhythm of fever will disappear and it will assume a continued form, and then the stage of delirium appears, with all other toxic symptoms If we expect success in our treatment the antidotal treatment must be commenced from the earliest stage, and never relaxed to the end Twenty grains (1 20) of quinin divided in three equal parts given three times a day will maintain the case in its simple type, keep the temperature down to 101 degrees in the morning and 102 degrees at evening, prevent typhoid symptoms, or other complications and finish up the case about the third or fourth week, but 30 grains (1 80) per day will do much better

A very interesting fact will be noticed in the therapeutic action of quinin here in its power to preserve the case in its simple rhythmic forms of fever and uncomplicated state, with moderate temperature, with clear mental faculties throughout Ten grains of bisulphate of quinin three times a day in a case of this kind will usually carry it through a course of two weeks and finish it up in that time

I am convinced of the importance of the patient having every night for restful sleep It will be observed that in all of these cases the medicine and nourishment are administered during the day If signs of insomnia appear the patient invariably has at night a hypodermic of morphia and atropia

The percentage of mortality in the cases treated by this method did not exceed 2 per cent In regard to the treatment of the pernicious form of congestive fever, I will briefly cite the history of a case for the purpose of illustration

Case 1—Adult aged 30, robust constitution, had a chill which lasted twelve hours before signs of reaction He was in a profound state of coma The pulse was exceedingly feeble and very rapid, the temperature under the arm was 90 degrees, in the rectum 106 degrees The extremities and surface were deathly cold, pupils dilated Sixty grains (gm 3 60) of quinin in a half pint of milk punch were injected in the rectum, the fiftieth of a grain (0012) each of strychnia and glonoin were injected under the skin Dry heat was abundantly applied to the surface These remedies were repeated by hypodermic every two hours In twelve hours signs of reaction began Consciousness was gradually regained, reactive fever set in, followed by perspiration The patient had two drams more of quinin, which prevented effectually a return of chill

I desire here more particularly to mention the action of glonoin in connection with quinin in these cases Those who have observed the course of pernicious congestive fever have noticed that the blood almost entirely recedes from the surface and extremities to the internal organs Probably three fourths of the circulating blood has accumulated in the brain, lungs, liver, spleen and intestines, while the arterioles of the surface are in a state of contraction

The action of the glonoin is to promply dilate these vessels to invite the circulation back to the surface and extremities and to preduce reaction

The prolonged chill of pernicious fever, and the difficulty of reaction mean the destruction or disorganization of a large proportion of blood corpuscles, and the intense internal congestions mean that these dead or disorganized corpuscles have lodged in the capillaries of the internal organs and are in a state of stasis Unless nature can again throw these dead and disorganized corpuscles back into the general circulation, which we term reaction, where they may be disintegrated and converted into urea, uric acid, creatin and creatinin, and in this form eliminated from the system the result must be fatal

Hence all of our endeavors in these cases are to produce speedy reaction, and to destroy the life of the parasite of malaria, and finally to eliminate them from the system

Tolerance of quinin—It is surprising how the system comes to tolerate these full doses of quinin when long continued and which are followed by no evil results I have given continuously for a month 10 grains (60) three times a day, and after the first few days all unpleasant effects on the nervous system would cease, when there would be a complete state of tolerance, and the remedy would act as a pleasant sedative tonic and antipyretic

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THE RELATION OF THE MEDICAL PROFESSION TO THE PUBLIC

Annual Address delivered before the Chester County (Pa) Medical Society January 1896

BY U GRANT GIFFORD, M D
AVONDALE PA

The stream rises no higher than its source, the fabric partakes of the color and character of its component fibers, and the medical profession is no exception to this rule

Certainly it is not to be denied that medicine stands sponsor for much that is intimately associated with human progress, happiness and well-being We look with satisfaction at the record of medical science and point proudly to her achievements in the relief of human suffering and in the prolongation of human life Vaccination, anesthesia and antiseptics compare well with any of the discoveries that grace the annals of human progress in any field Pathology and bacteriology have thrown beneficent light on many of the hidden problems and have placed some of the older tenets of medical faith on a scientific basis In the virgin but fertile field of preventive medicine a few furrows have been turned, some seed scattered and the fruit already gathered gives token of an abundant harvest [illegible] shall have [illegible] tilled Sanitar[illegible] been stu[illegible] pplied, corrected and classified, until we may speak indeed unblushingly of sanitary science In addition to these achievements the medical profession dispenses the most abundant (and in the fact that it helps the recipient to help himself) the most wholesome charity of our age

But while we may be justly proud of the progress of the profession along scientific lines, and of the position it holds in the rapidly advancing civilization of the day, it is by no means without blemish Evils that should not have an existence in a liberal profession are all too prevalent, and even the most superficial observer must recognize conditions that are a discredit to the profession and that should be corrected It appears to me that the rattling pace of our closing century civilization exerts a deleterious influence on the *morale* of the profession It may be because of the increased cost of maintaining a social position suitable to the dignity of the profession, or it may be in sympathy with the general spirit of gold worship and greed that characterizes our times, but for some cause or combination of causes too many members of the profession have lost sight of its true object, and have bowed before a golden idol There appears to be a growing tendency to measure a man's success in medicine by the size of his income There could be no greater fallacy, indeed it is more than a fallacy it is in many cases the diametric opposite of the truth In too many cases money-getting is the result of the adoption of methods that are contrary to the ethical spirit of the profession, the prostitution of its high office, and the substitution of conscienceless tact for conscientious talent That a competence is sometimes the reward of honest, conscientious toil in the field of medicine is not to be denied, but when money-getting is the primary aim and motive of a doctor's life, the true interest of the profession must necessarily become a subservient force In a profession where commercialism has no rightful place, gold may be a result, it can never be a legitimate motive

There is no question that the laborer in this field is worthy of his hire, nor is it to be denied that the fee may be in proportion to the skill of the laborer and the ability of the employer, but when the physician sees nothing higher in his services than his prospective fee, the transaction is brought down to a purely commercial basis, and it is to be regretted that a man who has no higher incentive should not have entered a field where barter and gain are the recognized purposes In those cases in which honor and riches have alike crowned the closing years of a doctor's life, it is generally observed that his earlier years were spent in arduous scientific work that brought little monetary recompense In poverty and toil such men have laid the foundation of a success that is not tarnished by mercenary motives nor dimmed by a greed of gold It may be that the extension of the course of study in the leading medical colleges will in a measure correct this growing evil The average income of a medical man will scarcely justify, from a commercial standpoint, the investment of from two to three thousand dollars and four years of the most active period of life At least it is to be hoped that the commercially inclined aspirant for the medical degree will so view the situation Let us hope that in raising the scientific, the ethical standard may also be improved and that the time may speedily come when we might, without absurdity or incongruity, paraphrase Holy Writ and ask what will it profit a man if he gain wealth and lose his professional honor

Certainly it would be improper to speak of quackery as a vice of the medical profession, possibly it would be unkind, but candidly have we a better name by which to designate certain practices that we all know are too common For instance, the habit of exaggerating the importance and gravity of a case, with the result of being credited with a rapid and radical cure of a condition that never existed It is true that the laity is at all times a willing partner in such deception and lend active ear and tongue to its completion, but the ease and facility with which it may be practiced and the gluttonous gulp with which it is accepted by the public, makes it none the less reprehensible and all the more dangerous It must be a fascinating study to the psychologist to discover the origin of that form of vanity that finds its gratification in personal abnormalism, or a departure from the accepted standard of physical condition, but who has not heard individuals describe their experience in illness or accident with all the pride and exultation that an old veteran infuses into his account of battles fought and won

It is said that one of the famous consultants of London was at one time summarily dismissed by a society lady for making in her case a diagnosis of boils and prescribing rest and iron, his professional neighbor receiving profuse thanks and a liberal fee for calling the disorder furuncles and giving directions that the patient at once cancel all social engagements and retire to a fashionable watering place while she should receive a course of ferruginous tonics The plebeians may have boils, but for the patrician they lack dignity Tact won the day, plain simple honesty was at a discount Nor was this an isolated or exceptional case, in some form or other this condition manifests itself in every walk of life and in every grade of society Dishonest desire loves its dishonest gratification But in such a compact the physician is accessory only at the expense of honesty and the sacrifice of the high sense that should characterize every member of the profession "There are no tricks in simple faith " Probably very few of us indeed have not been annoyed at the lack of discrimination on the part of the public in matters pertaining to professional standing, character and ability To have a patient in whom one is deeply interested, suddenly and without cause leave his care and consult a recognized quack is, to say the least, not very edifying But there is something in human nature that craves the mysterious To the laity mysticism and medicine have always had a close affinity and the elimination of the former from the latter has been noted as an index of the advance of human knowledge, but the emancipation is as yet by no means complete In ancient days, when the priests of the Temple ministered alike to disease of body and soul, we can not marvel that an ignorant populace ascribed all virtues of the healing art to mystic or supernatural causes, but that one hundred years ago the wand of Mesmer could agitate all Paris is more difficult to comprehend and, more difficult still to comprehend, that in our own day the shoemaker Schlatter should be to thousands the efficient embodiment of all that is potent in the healing of human ills This can only be explained by the existence of a blind, unthinking, ignorant and superstitious credulity on the part of the public It presents the paradox of the absolutely incredible being the most credible A willingness to prey upon this has ever been the distinguishing feature of quackery and desire to turn it to personal gain is always its underlying motive However this should be the special province of quackery, on which the regular profession has no right to encroach and a privilege we should leave to its exclusive use But is it? Does the regular profession as steadfastly refuse to invade this territory as the dictates of honor and the dignity of the profession would direct?

If we employ methods that to the untutored mind are scarcely more successful and are prompted by motives no higher, if we prey upon the ignorant credulity of the public as does the irregular and profit by the same deceptions, wherein lies the difference between medicine and quackery? Certainly there is a vast difference in the scientific standing, but this is not enough In medicine the scientific and ethical should be inseparably blended and if a gullible public fails to discern the difference between science and superstition probably it may find a distinction between honesty and dishonesty If our methods fail to merit the approval of the masses probably our motives will make a more successful appeal

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CHAIRMAN'S ADDRESS

Address of the Chairman delivered in the Section on Dental and Oral Surgery at the Forty seventh Annual Meeting of the American Medical Association held at Atlanta, Ga May 5-8 1896

BY E R ANDREWS, D D S, F R M S

CAMBRIDGE MASS

Permit me at the outset of our meeting, to thank you for the honor you have seen fit to confer upon me We are here, not for the consideration of the various kindergarten processes which go to make up the ordinary technique of our every-day affairs, but rather for the consideration of the higher themes in the realms of scientific research Our aim should be to search a little further into the borders of the unknown Some of the theories of yesterday have crystallized into the facts of today, and the knowledge gained benefits our whole professional brotherhood One of the evidences of advancement is a growing tendency, particularly in the larger cities among our leading men, who are not wholly satisfied with the average society proceedings, to band themselves together in the formation of the various stomatological associations for the consideration and discussion of questions purely scientific, and their proceedings thus far warrant excellent results The year has also given us a most valuable and brilliant series of experiments conducted on an accurate scientific basis, by which we know more of the physical properties of the teeth and of the various filling-materials These are to be noted as added treasures to our common knowledge

There has also been much thought given to the subject of electric medication By the latest cataphoric methods extremely sensitive teeth are completely obtunded and those badly discolored are successfully bleached

Our special schools are constantly advancing their standards, and the graduates are taking a higher ethical and professional standing wherever they go We look forward to the time when our students shall become the students of a medical university, where all the specialties of the healing arts are taught, and where a common degree shall be given to all Surely the surgical and medical care of the mouth and its associate parts is as important as that of the ear or eye or other parts requiring medical specialists, and this recalls to my mind the words of an ancient writer, one Apuleius, who, writing in the second century, says 'The mouth requires more sedulous attention than all the rest of the body, seeing that it is the vestibule of the mind, the gateway of speech, and the outer court of the thoughts "

It has been said that a man speaks best when speaking of a subject that is familiar to him I shall therefore call your attention to the consideration of the finer processes which take place in the building up of enamel To this subject I have given much thought and original research

In the February number of the *Dental Cosmos* of the current year was an original communication on the formation and structure of dental enamel, by J Leon Williams, of London The paper was read in substance before the Royal Society of Great Britain on December 12, 1895 In this article he advanced new ideas in regard to the finer processes of enamel-formation, and illustrated his paper with reproductions of his photo-micrographs, which are the finest that have ever been shown, or rather the finest that I have even seen

While fully recognizing the worth of Dr Williams' investigations in this field, I propose to criticise, in a friendly way, some of his theories, as they differ somewhat from my own conclusions arrived at after giving this subject a good deal of time and careful investigation, while writing my Berlin paper in 1889 In the article to which I have referred, Dr Williams makes this statement "The stratum intermedium performs a much more important function in the process of enamel building than has heretofore been supposed " He calls the reader's attention to the fact, well known before, that between the enamel-cells and the stratum intermedium is seen a narrow band which is clear sharply marked, and differentiated line separating these two layers of cells which have heretofore always been represented as closely connected He says that writers of acknowledged authority speak of the ameloblasts as being constantly renewed from the stratum intermedium He also states that the other end of the ameloblast lying next the forming enamel is also bounded by a similar line These appearances are not new, they are familiar to all investigators They have been constantly seen when studying the earlier stages in the growth of the enamel

The band, or, as he names it, the membrane between the stratum intermedium and the enamel-cells, is not constant This is clearly seen in several of the illustrations During the time of my own investigation of the enamel, I gave considerable attention to the consideration of these appearances, and was then led to believe that they were merely stages in the growth of the young tissue Some sections would show it, in others it was absent, each section showing the picture at the point where death left it In many of my sections the enamel-cells were in direct contact with the cells of the stratum intermedium some of them seemed to be actually passing down into the enamel-cells as though they were to become ameloblasts, and there was no appearance of any tissue between them This is why I think the enamel-cells are supplied from this layer Others have noted the same appearance

In a pa [illegible] ead [illegible] hicago, [illegible] late Dental Congress, [illegible] s [illegible] that t [illegible] ie developing enamel, as had already been found in the developing dentine, a fibrous substructure I there clearly demonstrated by my photo-micrographs that this fibrous substructure originated either in the cells of the stratum intermedium or from the embryonic connective tissue just beyond My photographs showed this fibrous tissue bridging the space where I had teased a layer of enamel-cells from the cells of the stratum intermedium I do not believe there is any such tissue as the membrana preformativa, as described by the earlier investigators At the inner surface of the enamel-cells toward the enamel, this tissue, under the microscope, has the same appearance as that which is found between the odontoblasts and the formed dentine It is a layer of a semi solid gelatinous tissue which investigators have named "border-land tissue," always to be found between the calcified tissue and the cells that form it This band is so narrow at times that it is scarcely to be seen, and sometimes it is as wide as the layer of cells As I have stated, these different widths indicate stages in its growth In the dentine layer are to be found numerous connective tissue fibers, first noticed by Mummery, of London, and into it the matrix-forming material is deposited

With my present knowledge, I can not consider the layer between the enamel-cells and the enamel a membrane, and indeed Dr Williams considers it doubtful, for he states that it is impossible at present to speak definitely in regard to its origin, exact structure, or function, but he considers it plays an important part in the elaboration of material for enamel-building As this is a partially calcified layer composed of globules and cement substance, lifeless material, I fail to see the important part it plays in the elaboration of materials for enamel-building It is a tissue that has been elaborated by the enamel-cells Dr Williams now passes to consider another feature of the enamel-forming organs—the stratum intermedium He states that these cells have heretofore been supposed to perform no particular function until the formation of the enamel-prisms was completed, when, it is believed, they undergo some modification of form and become calcified as the outer cuticular layer of enamel known as Nasmyth's membrane

In explaining the origin of this membrane I can not agree with this supposition Nasmyth's membrane is formed from the layer of ameloblasts left after the enamel is completed

Dr Williams says that he is able to show that the cells of the stratum intermedium constitute a no less important factor in the formation of enamel than the ameloblasts, indeed, he says it would appear that they are the more active of the two so far as concerns the selection of the proper material for enamel-building Again I can not agree with him The secretion of the proper material, the lime salts, comes from the blood supply everywhere found against the stratum intermedium after calcification commences This calcific material is absorbed by and only detected in the ameloblast, near its nucleus, as a microscopically minute globule, calco-spherite The evidence under the highest powers, is, that its formation and growth is within this cell

As I stated in my Chicago paper, I believe that the cells in the stratum intermedium are the origin of the fibrous substructure which serves as a scaffolding to build up the young enamel There is a possibility that this fibrous tissue, which I believe I have clearly demonstrated to be present, may originate from the connective tissue of the jaw which is against this layer, in fact, I have been somewhat in doubt whether or no the cells of the connective tissue of the jaw did not take the place of this layer after calcification had advanced, for in many sections it is difficult to distinguish anything but connective tissue cells against the ameloblasts

Dr Williams continues, "It has for many years seemed clear to me that the enamel-organ, and more especially the stratum intermedium, should be classed among the true secreting tissues' He states, "I am not able to understand how so many good observers have failed to see the intricate plexus of blood vessels which is very early developed in this layer of cells Wedl, Magitot, Legros and Sudduth say that they have uniformly failed to detect a blood supply within any part of the enamel-organ proper And yet in a large majority of my photographs it is as plainly evident as the ameloblasts or the stellate reticulum " Dr Williams can not mean that there is an intricate plexus of blood vessels developed from the cells of the stratum intermedium, these cells having their origin from an epithelial source The enamel-organ proper is a closed organ of epithelial tissue, with its central mass of stellate tissue having lime salts enough within it to form the first layer of enamel No intricate plexus of blood vessels is ever seen within this epithelial organ at this time Indications of a blood supply are to be seen just without, but never in or against the stratum intermedium, until the main mass of epithelial cells have disappeared and the connective tissue of the jaw is against the true enamel-forming layers Dr Williams' photographs do not show this intricate plexus of blood vessels in the enamel-organ proper

I can not believe Dr Williams agrees with Heitzmann and Bödecker in their idea that the stratum intermedium of the enamel-organ is a kind of connective tissue No, this intricate plexus of blood vessels has its origin in the true connective tissue of the jaw

I have never studied tissue from the jaw of the mouse or rat, consequently I have never seen the appearance which Dr Williams illustrates, nor do I believe the tissue of the stratum intermedium as shown, to be glandular tissue This vascular network in the stratum intermedium of the rat was seen and described by Professor Rowes and Mr Poulton, two English observers, some years ago, but they said nothing about its being glandular tissue In the jaw of the rodent, where the enamel is being constantly supplied as it is worn away, it would seem necessary that there should be a larger blood supply, and but natural that these numerous capillaries take the form of papillæ being so constantly active, but I fail to see that this implies that the tissue of the stratum intermedium filling up the spaces between the papillæ should necessarily be glandular

Dr Williams continues, 'Several observers of distinction, notably Dr R R Andrews and Professor Spee, have described the development of enamel as a process in which the tissue is formed by the deposit of droplets or spherules of calcoglobulin This view is undoubtedly correct, but, as stated by the authors mentioned, it does not include all of the phenomena that may be observed The first important fact to be mentioned concerning the appearance of droplets or masses of "calcoglobulin" in the ameloblasts is that the process is an intermittent one Sometimes the cells on one side of a developing tooth will be full of these masses, while on the opposite side there are none to be seen " "The ultimate structure of completely formed enamel shows that it is built up by the deposit of bodies, which are of very nearly uniform size There is, as we shall see, no uniformity in the size of these masses of "calcogobulin," neither is there anything in their structure which corresponds with that of formed enamel, in fact, under the finest lenses that are made they show as highly refractive masses without definite structure Although they are usually more numerous at the inner ends of the ameloblasts, next to the forming enamel, they may be seen throughout the entire length of these cells, and I have often seen them lying close up to the membrane which separates the ameloblasts from the stratum intermedium Occasionally I have espied them when they seemed to be actually in or emerging from this membrane It is possible, and I think highly probable, that this substance ("calcoglobulin"), although appearing in the ameloblasts, is really formed in the secreting cells of the stratum intermedium "

If the stratum intermedium, which is an epithelial product, plays so important a part in the formation of the material that Dr Williams takes to be calcoglobulin "for enamel matrix, why do we not find the same stratum intermedium in the dentine germ where this so called "calcoglobulin" is in the process of being constantly formed for dentine matrix?

The calco-spherites, which I believe to be the only matrix formers, are but partially formed in the protoplasmic fluids of these cells Their origin is from the blood supply This alone gives the lime-salts, which, passing through the fluids of the cells to the ameloblasts, become the calco-spherite, probably in the identical way as do the salts of lime in the presence of organic fluids as was seen in the brilliant experiments of Mr Rainey, Dr Ord and Professor Harting

Dr Williams forgets that calcoglobulin is a substance formed of these calco spherites, and only formed at the point of union with calcified tissue, where a further calcifying process gives it a texture impossible to destroy with acids Such a substance is not formed "in the secreting cells of the stratum intermedium "

It will be remembered that the contents of the ameloblasts were always spoken of as granular until I called attention to the fact that the contents were globular, not granular, as early as 1878, and as they pass down into the ameloblasts they are so minute as hardly to be seen with our best lenses It is only when they are within the ameloblasts below the nucleus that they are easily seen as minute globules At the ends of the cell nearest the enamel they take the shape they assume probably by coalescing They are somewhat larger than the rod they are to form, but seem to be drawn into the size of the enamel-rod by compression My photo-micrographs illustrate this beautifully The large masses of what Dr Williams calls calcoglobulin seen in some of Dr Williams' photographs are, I think, postmortem changes where many globules have coalesced, forming the large abnormal masses I have seen them coalesce from pressure on the cover-glass while examining specimens It is only when the globules are against the enamel and fixed by partial calcification that they show their real size My investigation teaches me that it is probably impossible that there can be two sets of globules, each of a different nature, forming in the enamel-cells, as stated by Dr Williams His statement that almost every different method adopted is certain to produce a greater or less modification of conclusions I have found to be true, and it was only after working over hundreds of sections and finally finding a way to prepare the tissue very near the life of the animal that I came to the conclusions which I gave in my Chicago paper

Speaking of the appearance of fibers in the young enamel he says, "The ameloblasts are raised from the developing enamel, and, projecting into the space thus formed, we see strings of the albumin-like material which sometimes extend quite across the clear part of the field In several places these strings are seen to be drawn out from the transparent droplets Whether these strings be drawn out from the interior of a calcifying enamel-rod, as described by Mr Charles Tomes, Dr Graf Spee and others, or are merely an extension of one of the transparent droplets, they are evidently always produced by the same material and substantially in the same manner, viz , by the drawing out or extension of an albumin like product of the enamel organ " In this Dr Williams loses sight of the fact, which I then clearly demonstrated, that there are fibers and many of them appearing like the fibers of connective tissue, passing from the cells of stratum intermedium through and among the ameloblasts He further remarks, "But whether in the form of droplets or strings this substance is probably 'calcoglobulin," an albumin-like material holding the calcific material, or at least some portion of it, in solution "

I think I have proven conclusively that these strings are not calcoglobulin They have a fiber foundation Allow me to quote from my paper "Appearances of calcified fibers projecting beyond the line of calcification I had already seen in forming enamel, and I commenced a series of investigations to see if I could find out what these appearances indicated

"I commenced by trying to tease apart enamel-cells, after some little experimenting I am quite sure I found evidence that processes from the cells of the stratum intermedium of the enamel-organ pass down through and among the ameloblasts to the forming enamel beneath And I judge that these are the processes which Mr Tomes saw and described as processes connecting the enamel-cells with the cells of the stratum intermedium I then commenced a series of experiments, trying to separate slightly the layer of enamel-cells from the stratum intermedium The parted edges had the appearance of broken processes, and in several specimens there are processes crossing from the enamel-cells to the stratum intermedium " And further, "Connecting with the fibrous net-work and running to the formed enamel beneath, we find innumerable thread like processes appearing like fibers To sum up my conclusions I am led to believe that there probably exists in developing enamel, as has already been found in developing bone and dentine, a fibrous sub structure on and between which the enamel is deposited After the enamel is wholly formed its existence seems to be wholly blotted out in the dense calcification of the tissue '

Dr Williams' strings of "calcoglobulin are really these fibers [illegible] wi[illegible] albu[illegible]like product